IN TWO SECTIONS SECTION I

January, 1948

EDISON ELECTRIC INSTITUTE BULLETIN

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PUBLISHED MONTHLY BY EDISON ELECTRIC INSTITUTE

ELECTRICAL RESEARCH STATISTICS
THE ELECTRIC LIGHT AND POWER INDUSTRY

Current Statistical Data Covering 100 Per Cent of Industry

October, 1946-1947

SOURCE AND DISPOSAL OF ENERGY—MONTH OF OCTOBER

	1947	1946	%
GENERATION* (Net)			
By Fuel Burning Plants	16,846,116,000	13,934,750,000	+20.9
By Water Power Plants	5,491,987,000	6,287,264,000	−12.6
Total Generation	**22,338,103,000**	**20,222,014,000**	**+10.5**
Add—Net Imports Over International Boundaries	83,548,000	119,582,000	−30.1
Less—Company Use	126,565,000	124,758,000	+ 1.4
Less—Energy Used by Producer	308,861,000	432,451,000	.....
Net Energy for Distribution	**21,986,225,000**	**19,784,387,000**	**+11.1**
Losses and Unaccounted for	3,330,449,000	3,063,093,000	+ 8.7
Sales to Ultimate Customers	**18,655,776,000**	**16,721,294,000**	**+11.6**

CLASSIFICATION OF SALES

NUMBER OF CUSTOMERS—As of October 30th			
Residential or Domestic	31,325,420	29,519,865	+ 6.1
Rural (Distinct Rural Rates)	1,493,590	1,352,196	+10.5
Commercial or Industrial:			
Small Light and Power	4,934,137	4,653,056	+ 6.1
Large Light and Power	190,469	174,671	
Other Customers	133,682	120,918	+10.6
Total Ultimate Customers	**38,077,298**	**35,820,706**	**+ 6.3**
KILOWATTHOUR SALES—During Month of October			
Residential or Domestic	3,601,151,000	3,129,839,000	+15.1
Rural (Distinct Rural Rates)	497,943,000	410,225,000	+21.4
Commercial or Industrial:			
Small Light and Power	3,293,445,000	2,820,990,000	+16.7
Large Light and Power	9,951,081,000	9,064,186,000	+ 9.8
Street and Highway Lighting	219,168,000	206,373,000	+ 6.2
Other Public Authorities	498,983,000	470,720,000	+ 6.0
Railways and Railroads:			
Street and Interurban Railways	338,283,000	351,297,000	− 3.7
Electrified Steam Railroads	209,660,000	220,740,000	− 5.0
Interdepartmental	46,062,000	46,924,000	− 1.8
Total to Ultimate Customers	**18,655,776,000**	**16,721,294,000**	**+11.6**
Revenue from Ultimate Customers	**$328,208,600**	**$292,697,200**	**+12.1**

RESIDENTIAL OR DOMESTIC SERVICE

AVERAGE CUSTOMER DATA—for 12 months ended October 31st			
Kilowatthours per Customer	1,418	1,312	+ 8.1
Average Annual Bill	$44.10	$42.64	+ 3.4
Revenue per Kilowatthour	3.11¢	3.25¢	− 4.3

(*) By courtesy of the Federal Power Commission.

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EDISON ELECTRIC INSTITUTE BULLETIN

Volume 16 JANUARY, 1948 No. 1

Power Industry Successfully Meets Peak Power Demands

Stories of Impending Power Famine Refuted

TELEGRAPHIC reports from power systems throughout the nation, received and compiled over the Christmas weekend, show that the greatest electric power demand in history was successfully met by the electric light and power industry this December, the period of greatest use of electricity, the Edison Electric Institute announced on December 30.

This accomplishment confutes "dope stories" of an impending power famine, current last summer and fall, and the recent "power shortage" report of REA Administrator Claude Wickard, Charles E. Oakes, President of the Institute asserted. It also confirms the estimates of the power companies' capabilities, made a year ago and re-affirmed in May by past President Grover C. Neff of the Institute and in October by Mr. Oakes.

An aggregate nationwide demand of 49,500,000 kw was carried by the electric industry with a margin of reserve capability of 5 per cent. This compares with a similar margin of 12 per cent in 1946 and 21 per cent in 1944. The rate of installing new capacity, however, has already overtaken the growth of power consumption and a reserve margin of 8 per cent is estimated for December 1948.

Reports covering some 50 million kw out of the national total of 52,300,000 kw showed that at the time of peak demand only a small handful out of 37 million customers had, by voluntary arrangement, their service interrupted or shifted to offpeak hours, and that the total amount of this curtailment was only 48,500 kw. This figure omits some 98,000 kw of interruptible power cut off during the time of peak demand in accord with contract provisions because this is normal for any year for such customers. The reports also showed that reduced voltage of 2 to 5 per cent in effect in a few areas, as precautionary measures against possibility of overloading, had an estimated total effect in reducing the peak demand by 75,000 kw.

The following is a summary of the power supply situation in the different sections of the country for December. Unless stated otherwise, no curtailment was in effect at the time of the peak:

New England: Reserve margin 5½ per cent but because of low stream flow a small curtailment and 3 per cent reduction in voltage in effect in some areas. On an aggregate peak demand of nearly 3,000,000 kw, the curtailment involved 1500 kw and the voltage reduction 20,000 kw.

Middle Atlantic: Reserve margin 7 per cent.

Central Industrial: Reserve margin 4 per cent, but as precautionary measures small curtailment, and 2 to 5 per cent voltage reduction in effect in certain localities. On an aggregate peak demand of approximately 15,000,000 kw, the curtailment involved 23,000 kw and the voltage reduction 55,000 kw.

Southeast: Reserve margin 6 per cent.

(*Continued on page* 31)

ANNUAL CONVENTION
EDISON ELECTRIC INSTITUTE
ATLANTIC CITY, N. J., JUNE 1-2-3, 1948

¶ The Sixteenth Annual Convention of the Edison Electric Institute will be held at Atlantic City, June 1-3, 1948. Five General Sessions are planned, the first on Tuesday afternoon, June 1, the second and third on Wednesday, June 2, and the third and fourth on Thursday, June 3. Meetings of the Accounting, Commercial and Engineering Divisions are scheduled for the morning of June 1.

¶ Plans for the Convention are rapidly taking shape under the general direction of the Convention Program Committee. Walter H. Sammis, President of the Ohio Edison Company, is Chairman of the Committee. Other members are H. B. Bryans, President, Philadelphia Electric Company and L. V. Sutton, President of the Carolina Power and Light Company.

¶ Further information on the Convention will appear in later issues of the BULLETIN.

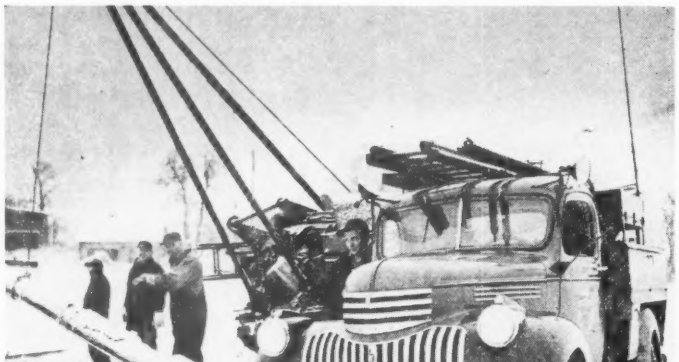
Pennsylvania Power & Light Co. Uses Emergency Radio to Restore Storm-Wrecked Electric Service

THE vital importance of FM mobile radio communication equipment in restoring electric service to extensive storm-crippled areas, in which regular telephone service was also lost, was amply demonstrated in the Pennsylvania Power & Light Company service area as an aftermath of the unprecedented sleet storm which struck large portions of that company's territory in December, 1947. The populous eastern section of the power utility's 9,300 square mile service area in Central Eastern Pennsylvania was focal point of the worst sleet storm there of the century, which started the New Year by playing havoc with the company's distribution system throughout the affected area.

Making continuous use of 19 of its fleet of mobile, truck-mounted radio units throughout the critical period, the radio scouting patrol was able to quickly locate and report literally hundreds of storm-wrecked lines. Not only did the radio cars save endless hours in searching out available means of communications, but eliminated the waste of line trucks and crews in locating trouble under the ever-changing storm conditions. Constant contact with headquarters also served to efficiently coordinate the routing of proper supplies and personnel to each of the individual jobs.

With an estimated 80,000 suburban and rural customers, minus electric service at one time or another during the storm, the company is able to cite case after case where mobile radio communication contributed vitally to public safety and quick restoration of service. Among the highlights, one of the larger hospitals had an emergency operation in progress, and the company was able to restore regular service in a matter of a few minutes by dispatching a radio cruiser car working in the vicinity to clean up the trouble spot at the hospital. Another critical case was the quick restoration of service in the home of an aged woman, ill and in danger of pneumonia, where the outage had also cut off the heat service.

Typical of many farm incidents, the loss of several thousand turkey poults was averted when a radio car, dispatched from a nearby location, was able to restore service to the brooder operation quickly.



Radio scout car calls the central office via mobile radio unit for additional supplies and equipment to restock a hard-working line truck in rural emergency operations

Aftermath of the worst sleet storm of the century in a large portion of PP&L's service area; streets were cluttered with branches and torn electric lines as in the scene above

While in development of its radio telephone service, the company had, to a large extent, foreseen the varied and unusual applications of mobile radio telephone service during emergency conditions, the New Year's storm actually demonstrated a vital importance far beyond anything imagined.

In the words of one of the line foremen constantly in the field directing storm operations, when asked how radio was helping him, he replied: "I don't know when we'd ever finished all we had to do without this amazing short cut. Instead of wasting needed hours in hunting trouble, we could put all of our time directly to the big important job of getting service back to our customers."

Community Builders

An Introduction to the Case History of an Electric Company; Its Origins, Its Growth and Its Services to the Communities It Serves, Its Future

By A. C. Spurr
President, Monongahela Power Company

IN an unprecedented all-day general staff meeting attended by 250 employees of the Monongahela Power Company at Fairmont, W. Va., on December 5, 1947, A. C. Spurr, president, together with Monongahela's top management presented a refreshing viewpoint on the history, past and present of that company. The addresses were made to "spread the story" to all company employees of the history of company's development in service to its community, and to point the way in the $40,000,000 expansion program which is to be completed by 1952.

The whole story, told in an all-day session that was climaxed by an address by President E. S. Thompson of the West Penn Electric Company, Monongahela's new "parent" replacing American Water Works and Electric Company, was prepared not only for those who attended the sessions but for every man and woman in the Monongahela organization. The story is to be carried "down the line" by those who attended the meeting. To help in spreading the story, divisional meetings will be held and copies of the speeches in their entireties will be made available to each division.

President Spurr keynoted the meeting with a general outline of the program. W. V. Drake, manager of power generation, talked on the problems of generation and described the effect that the Company's new Willow Island plant will have on the situation. H. O. Sprinkle spoke on transmission and distribution problems, paid high tribute to the men who made the Company's facilities serve the heavy war and postwar load and gave a brief picture of line construction that is planned. J. Lee Rice, Jr., treasurer of West Penn Electric, discussed the problems of financing the expansion program and presented a clear picture of Monongahela's financial structure.

After lunch, Vice President Leatham spoke on "Building Our Territory for a Prosperous Future" and emphasized the job that can be done by all Company personnel through the territorial development program.

President Spurr concluded the afternoon session with a talk on "The Effect of Government-In-Business on Our Expansion Program." He told of the apparent socialistic tendencies of a government-in-business trend that is built on governmental invasion into the power field and warned employees that a very real danger exists, even in this Company's territory. "The only preventative," he told his audience, "is to make the services of the private power company adequate and satisfactory."

President Thompson explained the change in top ownership that has seen the dissolution of American Water Works and Electric Company and the re-establishment of West Penn Electric as the "mother" company. His outline of system policies held much encouragement for the future of Monongahela.

Mr. Spurr's introductory speech before the general staff meeting is reproduced on the following pages.

LADIES and gentlemen of the Monongahela System, I welcome you to a very full and a very important day in our history.

If my memory serves me correctly, this is the first time in my twelve and a half short years here that we've had a meeting such as this.

Some of you may be wondering about the reason for a meeting of this magnitude. Whether we want you to support a stock sale? What more do we want you to do than you've already been doing? Well, I am happy to tell you that our recent issue of bonds and preferred stock was sold, so you can dismiss that part of the question.

As to the second part, "what more do we want you to do than you have been doing?" I hope the answer will be unfolded as the day's program progresses. We hope to acquaint you in detail with the company's program for expansion and development. Through this understanding we hope to develop such a spirit of teamwork that will make some of the rough spots a little smoother and cause everyone to realize more clearly his or her importance and responsibility in the total picture of our organization.

I just referred to twelve and a half short years. Short they have seemed, and yet as we look back they've been fairly full of action. On January 1, 1935, we had 81,889 customers, 52,000 kw of generating capacity, about 225 miles of transmission lines, a little less than 2,500 miles of distribution lines, and 1,354 employees. We were in the power, gas, water, street car, bus, toll bridge and ice business.

Today we have over 145,000 customers, 137,000 kw of generating capacity, approximately 250 miles of transmission lines, 7,500 miles of distribution lines and 2,644 employees.

Thus, in twelve and a half years our generating capacity has more than doubled, the length of our distribution lines has tripled, we have about 63,000 more customers and we have 1,290 more employees than we had at the start of 1935.

For the war period, expansion was stymied but with VJ Day and at least a partial relaxation of controls, the pent-up demand of the war years burst the dam and we were launched on an expansion program without precedent in the history of the company. The development of the salt brines in the Ohio Valley and the fine industrial potentialities of that great valley has brought an industrial upsurge which by 1951 will bring a 133 per cent estimated increase in our load in the Parkersburg area, alone. To meet this new need in the most economical manner we have planned to construct a new power plant called Willow Island, just south of St. Mary's, at an estimated cost of $11,062,000. The first unit of 50,000 kw will come on the line early in 1949 and the second late in 1950.

That's just the beginning, and only the beginning as Captain Henry used to

say. There is $5,000,000 to be spent in reaching the backlog of rural customers, and when that has been spent we will have reached approximately 90 per cent of the total farms in our territory. We need more transmission lines to augment and supplement existing supply lines; we need more substations, garages, trucks and cars.

But it's not my purpose to describe all that lies ahead. Others much more conversant with the details I know you want to hear about will tell you more.

It is my purpose at the outset to tell you why you've been asked to come in and counsel with us.

Faith and Finance

This is a big program of expansion for a company our size. When it is completed we will almost have doubled the size of our electric properties.

Now this program will entail many problems, many decisions and, I'm fearful, many headaches. It's going to take a lot of smart thinking to put it over. Hence, we want the help of all of you and all of your associates and fellow workers. In order that you may have ample opportunity to think out the problems that will be presented to you during the day, I want to say that all who address you will talk from written papers. Copies of these talks will be available to every employee of the Monongahela team. If you are particularly interested in one or more of these talks we shall be happy to furnish the complete text. For after all, this is to be (as all our work has been in the past), a team job and the better informed we all are the better we can do the task that confronts us.

The fact that you will receive copies of what is said today should not, however, permit you to fail to pay attention because I know as you hear the outlines there will be questions that will arise in your minds. These we want to answer as best we can. So, as questions arise, write them out and at the end of the day we'll try to answer them. These questions and answers also will be included in the minutes of the day's meeting. You may or may not sign your name, as it pleases your fancy.

Before we go into the details of the program ahead, I would like to sketch for you a brief history of this company, to give you a background for what is to come.

Today we're proposing to back our faith in the future of the territory with an expenditure of many millions of dollars. That's venture capital, but no more of a venture than the $8,000 that a small group of pioneers invested in a power plant here in 1889 when they gambled on a new source of power to serve a lusty and growing coal field. This was a one-industry area then. Certainly the future was not nearly as well defined or as bright as it is today.

From that first 60-kw plant located on the river bank near the B & O station in Fairmont we've grown to our 137,000-kw capacity and beyond. A few weeks ago we hit an estimated new peak of 212,000 kwhr at 8 o'clock in the evening.

From that small plant of 1889 we have come a long way, but the pattern always has been the same. Forward-looking people have risked their earnings, backing up their faith in the future with investments that have made it possible for the electric industry to forge ahead, always keeping a few jumps ahead of demand. It has taken a lot of nerve, a lot of belt-tightening and a lot of work. But we've always made the grade, a tribute to the workability of the American system of free enterprise.

Community Pioneers

The people who built the first electric plant in Fairmont, as well as the early plants in most of the communities which we serve were the men who were interested in the growth and development of these communities. The Watsons, J. M. Hartley, Smith Hood, Walton Miller, the Flemings were the pioneers in Fairmont with the vision to see that electricity would be a great factor in shaping the destiny of this community.

Over in Clarksburg "Uncle Dick" Lowndes, the highly successful merchant and banker, recognized that Clarksburg could not advance without electricity and he pioneered there, adding this service to the many others in which he was interested for the development of the city's business and industrial life.

At Elkins, Henry Gassaway Davis and his son, John T. Davis, realized the importance of electricity in their plans for the development of that area and they installed the first power plant there.

Over in Marietta in 1901 we find those sturdy citizens, W. W. Mills, John Kaesar, W. H. H. Jett and others, heading an organization to promote electric service there.

A few years earlier the first electric plant had been established in Parkersburg by a Company in which such men as C. V. Shattuck, Senator J. N. Camden, W. N. Chancellor, Sprigg D. Camden, Reese Blizzard, Judge L. N. Tavenner, Tom Logan and others were prominent.

Down at Morgantown such outstanding and forward-looking men as E. M. Grant, Governor Glasscock, Judge Sturgiss, Dr. I. C. White and others were responsible for installation of the first electric plant.

Community Builders

And so it goes in practically every community. Men with vision and courage ventured their capital in this new field. They had many headaches in those early days pioneering in a new field but they were determined to overcome obstacles. Actually they were more than pioneers, they were *community builders.* I hope we can catch some of their spirit in this meeting here today.

This company in its early years was preeminently a transportation company, depending on its street car system for its principal revenue. Transportation was a public need of that day, and electric cars were the answer. Generation of power was merely incidental. Electricity in the home and in the factory was something new.

Today, however, all of that has changed. The transportation business, which prospered before the automobile was accepted into common use and before there were good roads to carry people and products, gradually faded into the background as the demand for electricity in home, plant, store and farm grew. In 1914, the Hutchinson plant was opened to meet the growing demands of industry and it was thought then that it would be adequate for many years to come. But just two years later it was closed. Its capacity was too limited; its method of generating power too expensive. Even in those days, conditions changed rapidly.

By the same token, we thought Rivesville would be adequate for ten, even twenty years after we made the last expansion of its capacity back in 1943. But here we are, four years later, up against a tight power situation and talking about another plant, equal to the size of Rivesville, which will be little more than adequate to meet the needs of 1951.

By 1922 it was apparent that the company, to survive, had to broaden its scope, generate more power and create a market for that power. Transportation alone wasn't sufficient. It already was proving so inadequate that there was pressing

need for capital and credit. The capital and credit was found, and from there started the real transition from transportation to power.

Since 1922 the trend has been definite. We've gotten out of transportation; we're out of the water business and we no longer sell ice. We're in the electricity and gas business, and concentrating on electricity. That we're on the right track is clearly indicated by some of the figures I quoted to you at the outset.

I think at this point that a couple of charts can tell much better than words the transition that has taken place.

First let's look at Fig. 1 on "Growth of Revenue and Comparative Importance of Sources." Those four pies tell the story. In 1916 just 31 years ago, electric sales amounted to only 9 per cent of our business. In 10 years it grew to 63 per cent. By 1936 electricity was definitely our chief purpose in life. In the last pie you see it a year ago—transportation completely eliminated and electricity representing 90 per cent of our revenue.

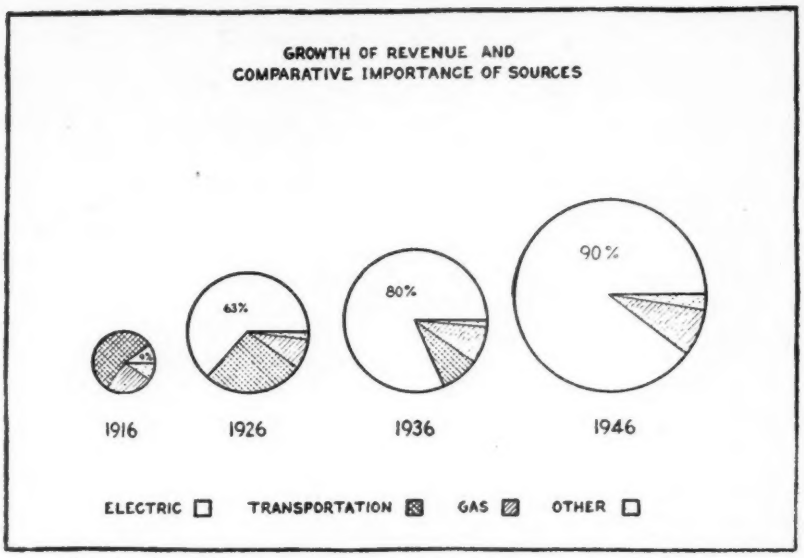


Fig. 1—Growth of Revenue and Comparative Importance of Sources—Monongahela Power Company

Customer Growth

Fig. 2, "Growth in Number of Electric Customers," gives a break-down on the public we're serving. Starting from just above zero in 1915 the trend has been steadily upward. You'll notice the broken line which shows the anticipated number of new customers up to 1952. Today we are well past the 148,000 mark and by the end of this year should be at the 150,000 mark without too much trouble. You will notice that we're figuring on 185,000 electric customers by 1952.

As far as the gas business is concerned, I can tell you here that it never will be as important as it has been in the past. The supply of natural gas in this area is rapidly being exhausted. That means that we must buy gas from places as far distant as Texas, and that also means we pay so much for the supply that it no longer is profitable to operate at our rates.

For the past few months you no doubt have been hearing a lot of talk about a five year program. I'm going to try and give you just the highlights of that program and what it entails. The five-year period, I might mention here, is started already. The cycle winds up with the end of 1951.

In that five-year period we will make expansions and improvements that will practically double our entire electric properties and our investment in them.

Biggest item on the agenda is the Willow Island Plant, which is already under construction. By October 31 we had incurred expenses of $2,298,158, on the project. Between now and the end of next year we will have spent close to another eight and a half million dollars there. The estimated cost of the new station, with its initial generating unit, boiler and other equipment, is $11,062,000. It will be a coal-burning, steam electric generating system, with an initial generating unit of 50,000 kw expected capability. We expect to have it in operation by early 1949.

Also, during the remainder of this year and 1948, we expect to spend $5,096,000 on electric transmission and distribution facilities, another $3,102,000 on rural electric distribution facilities,

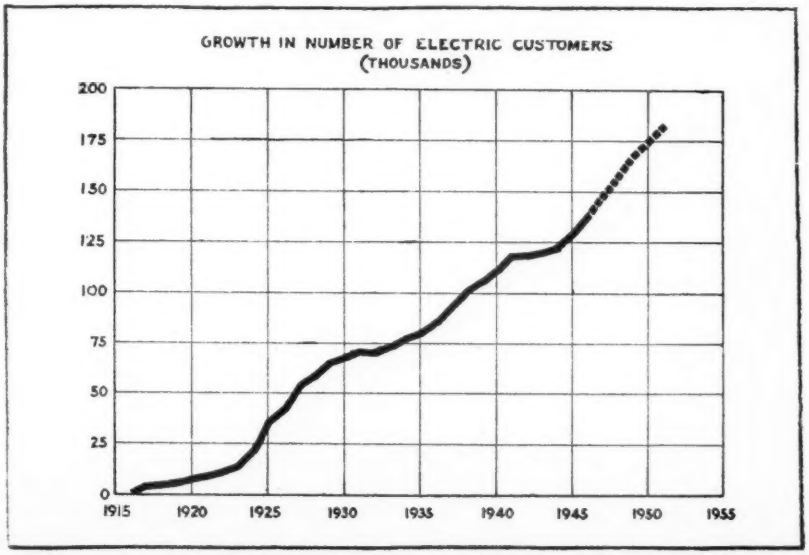


Fig. 2—Growth in Number of Electric Customers—Monongahela Power Company

and half a million for other improvements.

I'd like to list some of the major transmission line projects now in progress included in that estimate of more than $5,000,000. We're going to spend close to a half million dollars to buy from the Federal Government the 23 miles of 132,000-volt steel tower transmission line built to serve the Morgantown Ordnance plant during the war. The line runs from Rivesville to a connection with the West Penn's lines near the Pennsylvania boundary.

Along the Ohio River we plan reconstruction of approximately 37 pole miles of 66,000-volt transmission line and certain substation facilities to permit operation at 132,000 volts over a line extending from a point about three miles below Willow Island to an interconnection with the Wheeling Electric Company lines in Marshall County.

Twelve pole miles of 132,000-volt wood transmission line are needed to connect the new du Pont plant at Washington Bottom, below Parkersburg, and there's 17.5 miles of 66,000-volt line from Terra Alta south to the Maryland border to serve an industrial customer in that area.

Territorial Development

That's only two years of the program, and involves the expenditure of an estimated $18,172,000 in addition to what we've spent already on Willow Island. Anticipated development of the territory indicates the need for substantial further expansion after 1948. Among other things, the Company hopes to install a second generating unit of 50,000 kw capability in the Willow Island station so that some time in 1950 that plant will be able to put 100,000 kw on the line, nearly matching Rivesville's capacity. Cost of installing that second unit, together with the necessary boiler and other equipment, is $8,100,000.

The company estimates that the other construction projects for the years 1949 to 1951, inclusive, principally for electric transmission and distribution facilities, will approximate $15,600,000. We hope to be able to meet a substantial portion of the cost out of our own funds, but it very probably will be necessary to supplement these funds by financing in connection with construction expenditures after 1948. The nature and extent of such financing will be determined in the light of circumstances and conditions existing at that time and which cannot now be foreseen.

There may be additions to or modifications of the construction program described above and changes in material, labor and other costs which would change the above estimates. But as the picture appears now, we can write down in our books that between now and the end of 1951 we will have spent over $40,000,000 for expansion of our facilities. Even today, $40,000,000 isn't hay.

The Financial Status

While we're talking in millions, I'll try and give you a brief picture of the Company's financial status.

The present capitalization and surplus of the company and its subsidiaries consists of

$22,000,000	3% Bonds, due 1975
7,000,000	3% Bonds, due 1977
3,200,000	2% Serial Notes
9,000,000	4.40% Preferred Stock
4,000,000	4.80% Pref. Stock, Series B
8,468,000	Com. Stock and Premiums
5,725,000	Surplus

or a total of $59,393,000 compared with an authorized capital of $40,000 back in 1890 when the first company in what is now the Monongahela System was organized.

The Bonds of the Company are owned by insurance companies, investment trusts, savings banks in some States, and individuals in 27 states and the District of Columbia.

Our 2 per cent Serial Notes are held by the National City Bank of New York, The New York Trust Company, and Mellon National Bank & Trust Company, Pittsburgh, in approximate equal amounts.

Our 4.40 per cent Preferred Stock is owned by 2,194 stockholders residing in practically every state in the Union. West Virginians owning 21,106 shares number 767, or 23.5 per cent of the 90,000 shares outstanding.

The 40,000 shares of our new 4.80 per cent Preferred Stock, issued in September of this year, was owned, as of October 15, by 808 stockholders including underwriters through whom the issue is being sold. Of these 808 stockholders 411 were West Virginians owning 11,378 shares.

The one million shares of our Common Stock outstanding is owned by our parent companies, 584,000 shares by West Penn Power Company and 416,000 shares by West Penn Electric Co.

Our Plant and Property account, carried on our books at original cost, amounted to $55,204,000 at September 30, 1947. In addition we have on the books $2,644,000 representing the difference between the cost to us and the original cost of operating properties and companies we have acquired from time to time. This amount is being amortized over a 15 year period beginning July 1, 1945.

Gross revenues have increased from $178,842 back in 1904, the first year records of earnings were kept, to what we anticipate will be in excess of $18,500,000 this year.

Two general refinancing programs and one financing program for new capital have been carried out in the last twelve years—the first in 1935 when seven different bond issues of the company and its subsidiaries were called in for redemption and $22,000,000 new bonds with an interest rate of 4½ per cent, and $7,500,000 of 6 per cent debentures were issued and sold; the second in 1945 when the bonds and debentures that were issued and sold in 1935 were called for redemption, together with our 7 per cent Preferred Stock. Our $22,000,000 of outstanding 3 per cent Bonds, due 1975, and our 4.40 per cent Preferred Stock were issued and sold to the public, through underwriters, at that time. Also 82,500 shares of Common Stock were sold to the West Penn Electric Company, and our 2 per cent Serial Notes were negotiated. A considerable saving in interest and preferred dividends was effected through the 1945 refinancing. The financing in September of this year when $7,000,000 of 3 per cent Bonds, due 1977 and $4,000,000 of 4.80 per cent Cumulative Preferred Stock were sold was for the purpose of raising additional funds necessary to carry our construction program through 1948.

That, I think, just about concludes all I have to say right at this time. During the remainder of the day you're going to hear from people who have at their finger tips the details of the program which I have outlined to you.

I hope that all of you get as much out of this session as I think you will. You were invited here today because you are the key men and women of the organization for which all of us work. Because you have the "know-how" to get a job

(*Continued on page* 31)

Current Problems in Depreciation Accounting

By James V. Toner
President, Boston Edison Company

A paper presented before the Controller's Institute of America at the Algonquin Club, Boston, Mass., on November 18, 1947.

ONE of the basic reasons for confusion in regard to depreciation is a misunderstanding of the function of depreciation accounting. It is not the function of depreciation accounting to attempt to record the loss occurring from the use and/or ownership of depreciable assets as it would be not only a practical, but also a theoretical impossibility to determine with any degree of accuracy the periodic loss resulting from the use and/or ownership of such assets. No better summary of this point has come to my attention than the following quotation from the opinion of Mr. Justice Brandeis on the United R. & Electric Co. vs. West case.

Irregularity in Depreciation Accounting

"There is no regularity in the development of depreciation. It does not proceed in accordance with any mathematical law. There is nothing in business experience, or in the training of experts, which enables men to say to what extent service life will be impaired by the operations of a single year or of a series of years less than the service life. . . . The main purpose of the charge is that irrespective of the date of depreciation there shall be produced, through annual contributions, by the end of the service life of the depreciable plant, an amount equal to the total net expense of its retirement. To that end it is necessary only that some reasonable plan of distribution be adopted."

It is not, therefore, the periodic loss in the depreciable assets themselves that the accountant is attempting to record, but rather he is allocating to each period's operations some portion of the total loss to be experienced when the depreciable assets reach the end of their service life and have to be replaced. The account to which this allocation of loss is charged each period should be called "Provision for Depreciation" or "Plant Cost Allocated to Operations," rather than to an account just called "Depreciation."

This seems a little like "hair splitting" but there is no question in my mind but that very much of the confusion now existing in relation to depreciation accounting is due to an accumulation of careless or non-descriptive terms used in relation thereto. We speak of rates of depreciation, when in reality we mean the method of determining the periodic allocation of the total loss. We speak of depreciation methods, when we really mean the method of distributing the total loss to the various periods, et cetera.

Before leaving the subject of the periodic charge for allocating the portion of the cost to the operations of the period, I desire to call to your attention, for later reference, the effect of this charge. Inasmuch as there is no actual disbursement of the amount of the periodic provision for depreciation, there is withheld in the form of some asset an amount equal to the provision for depreciation. The amount so withheld, unless there is a specific replacement fund set up on the books, becomes intermingled with the other assets of the business and loses its identity.

To record the accumulation of the periodic allocations of loss to operations, the account "Reserve for Depreciation" is used, and the balance of this account represents the net accumulation of the allocation of the cost of the use and/or ownership of depreciable assets up to date. It should, in other words, reflect the net assets withheld somewhere in the business as a recovery of the cost or original capital invested in the depreciable assets.

Misconceptions of Depreciation Reserve

There is no account in use in accounting, the functions and implications of which are so completely misunderstood as the account "Reserve for Depreciation." Only the other day I was asked these questions by a person who is supposed to be quite informed: "Why, if you have a Reserve for Depreciation account balance of $50,000,000 are you required now to borrow $15,000,000 to pay for capital additions? Why, to the extent of the Reserve for Depreciation, isn't the same capital being charged into operations twice? Why, if you have invested your entire assets resulting from the provision for depreciation in new plant, have you still a balance of $50,000,000?"

Much of the difficulty in the understanding of the function of this account "Reserve for Depreciation" comes from the use of the word "Reserve." This word is commonly associated with money in the "sock" and I am frank to admit that I know of no way to put across to the layman the real function of the account, with all its implications. A change in the name of the account to one which may more specifically indicate its function might cause even more confusion. But I do want to leave with you most emphatically, that the account "Reserve for Depreciation" does not mean to the layman what it means to accountants and comptrollers.

Balance Sheet Statement of Depreciable Assets

I do not want to leave this phase of my subject without commenting upon the showing of depreciable assets on the balance sheet. The first point I desire to stress is the desirability of showing the depreciable assets at cost, and the showing of the amount of the accumulated reserve up to date for those assets. There has been a growing tendency to net these two figures in recent years, and it is my opinion that by so doing two very significant facts, namely the total cost of the fixed assets used in the business, and the portion of that cost which has been recovered by allocations to operations, are lost sight of. Not only are these two facts very significant, but they are entirely different, and should therefore be shown separately.

That separate showing of these accounts leads quite naturally to the "old chestnut": Where on the balance sheet should the Reserve for Depreciation account be shown—on the liability and capital side of the balance sheet, or as a deduction from the so-called related assets on the asset side of the balance sheet? Twenty-five years ago I could have answered this question as categorically as

anyone wished, but I must admit that today I have a considerable amount of the conservatism that comes with age, and I must answer this question by saying that it should be shown on the balance sheet in whatever way it most clearly reflects the facts. It is well within my recollection when the Reserve for Depreciation was always shown on the Reserve, Liability and Capital side of the balance sheet. And I remember very well the change to the present practice, now common in most types of business, to show it on the asset side of the balance sheet, as a deduction from the fixed assets.

Let us examine very briefly what we do when we show the reserve for depreciation as a deduction from the cost of fixed assets on the balance sheet. The cost of the fixed assets is a fact, and, as stated previously, a very important fact for one analyzing the statement. The reserve for depreciation is the net accumulations of the provisions for depreciation based, not upon the actual loss in value of the assets up to date, but on an arbitrary allocation of the total loss during the service life of the capital invested in the assets. The difference between these two accounts does not represent value in any sense of the word, but it merely represents the cost of the fixed assets *not yet* allocated to operations. This difference is often referred to as "book value," "carrying value," and so forth, and if those terms are synonymous with "cost not yet allocated to operations" then they are properly used, otherwise they carry a wrong impression.

Another thing that troubles me, when the reserve for depreciation is deducted from the fixed asset costs, and when there is no specific depreciation fund, is the accounting for the net assets that have been reclaimed and withheld in the business through the allocations to operations of the cost of depreciable assets. Where are these net assets shown on the balance sheet? Some of them may be reflected in the fixed asset accounts on account of additions; some of them may be reflected in any or all of the current asset accounts; and some of them may be reflected by a decrease in liability accounts.

Effect on Presenting Current Condition

If there is an accumulation of current assets in a business, resulting from the charges for depreciation, which are awaiting investment in replacements, it is quite possible that a wrong impression regarding the current position of the company is given. The years 1942-1945 are good illustrations of this possibility.

We keep liability accounts and equity capital accounts in order to show where all of the assets come from, or to show the creditor and stockholder equities in those assets. If some of the creditors' or stockholders' capital which was originally invested in depreciable fixed assets has been recovered through the charges as provision for depreciation, and retained in the business in the form of gross or net assets, why shouldn't the Reserve for Depreciation be shown on the liability or accountability side of the balance sheet, to show the amount of assets, net or gross, which are presently in the business because of the recovery and retention of some of the capital originally invested in the depreciable assets? Rarely are all the assets that are recovered as part of the cost of the original capital invested in depreciable assets reinvested in additional fixed assets. Large amounts of such recoveries flow into other assets, and it would seem to reflect these facts more clearly if the Reserve for Depreciation was shown on the so-called liability side of the balance sheet with the other accounts which reflect the source of equities in, or claims upon the assets. If any one wants to determine the portion of the capital invested in depreciable assets which has not been recovered up to date through charges as provision for depreciation, it is a simple matter to subtract the balance of the Reserve for Depreciation account from the cost of the depreciable assets to obtain this figure.

Reinvestment in New Assets

One of the frequent questions asked by business analysts relates to management's policy in regard to the reinvestment of the net assets resulting from the allocation to operations of the provision for depreciation. They want to know the ratio of the periodic charge to the amount invested in new capital additions. I have never seen the Reserve for Depreciation broken down on the balance sheet to show the disposition of the corresponding assets, but I wonder if the balance sheet wouldn't be far more valuable if some of these facts were disclosed on the face of this statement. Certainly it is worth thinking about, particularly today when the financial statements have such a broad circulation.

Financial statements are now sent to investors, employees, and in many cases to the public at large, but we have failed and are still failing to put across the message which these statements should convey. Admittedly, accountants and people with accounting training understand these and can interpret them, but many of those for whom they were prepared do not comprehend them. Accountants should attempt to talk the language of their audience, rather than try to get the audience to understand the accountant's language.

Now, let us consider the second part of my subject, namely, current problems of depreciation accounting, and confine the discussion to three of these problems which I consider most important.

The first of these problems is the current agitation for the current charge as provision for depreciation to be based on replacement costs rather than on original cost. This is not a new idea, as it has been re-agitated in my own memory every time that there has been an increase in prices; and it sinks into oblivion every time there is a price recession.

Replacement Cost vs. Fixed Dollar Value

Fundamentally, this involves the question of whether depreciation accounting should be based on the dollar as a fixed unit of measurement, i.e., the dollar cost, or upon the continuously varying purchasing power of the dollar. Under this latter theory the capital to be recovered by the depreciation policy would not be the original cost of the asset but the cost of the replacement of the asset at the end of its service life. All this would do, in my opinion, is to put one more guess or variable into the determination of the current charge to be allocated to the operations of each period. It would remove from such calculation the only known present factor, the cost at date of acquisition, and would substitute therefor a prophecy as to future cost, which could be just as wrong on the up side as on the down side.

To realize the practical absurdities connected with such a theory, take a look at the variations of the purchasing power of the dollar for the past 40 years; or, to bring it within the memory of most of us, let us look at these variations since 1929. The National Industrial Conference Board released recently a chart showing the purchasing value of the dollar in the United States from 1929 to 1947. The 1935 to 1939 dollar was used as 100 in this chart. In 1929 a dollar spent for construction would have a pur-

chasing power of 108 of the 1935-1939 dollar; the dollar spent in 1932 a purchasing power of about 140 of the base; the dollar spent in 1940 a purchasing power of about 90 of the base; and a dollar spent in September, 1947, has been reduced in purchasing power to only 53 cents.

Is there any living individual who can predict today, with all the economic, political, and social complications that exist, what the 1935-1939 dollar will purchase in 1952?

I believe, with all deference to those who hold otherwise, that it is the accountant's responsibility to recover during the service life of the depreciable assets the original cost of such assets measured by our unit of measurement of values, the dollar, irrespective of its purchasing power. Stated in other words, I believe that it is the accountant's duty to recover during the useful life of the depreciable assets the same number of dollars as were orginally invested in such assets, and it is the obligation of the financial officer, if those dollars are not sufficient to replace the assets, to have provided through retention of profits or to provide through other ways the additional capital required to replace the assets.

I like the heading used in the October issue of the *Journal of Accountancy*, in reprinting the special statement by the Committee on Accounting Procedure, A. I. A. on this subject—"Appropriation, Not Charges, Recommended to Cover Inflated Replacement Cost." In connection with this subject, I would refer you to that statement, reprinted on pages 289-290 of the *Journal of Accountancy*.

Determination of Periodic Charge

The second current problem relating to depreciation accounting is the determination of the periodic charge for depreciation to be allocated to operations in the case of new assets constructed or purchased at the prevailing high prices. In order that the provision for depreciation on these high cost assets may not be a burden on the more remote future years, it is suggested that greater provision for depreciation be made in early years of the life of the assets, so that a considerable portion of the excess cost of the depreciable assets may be allocated to operations during the prevailing high prices.

To accomplish this objective, the declining-balance method of calculating the periodic provision for depreciation could be used, or some arbitrary write-off of the abnormal costs over a relatively few years would accomplish this same result. The declining-balance method has been given some support by the Treasury Department, but it is doubtful if the write-off of abnormal costs would be allowable for tax purposes.

The matter of spreading the cost of depreciable assets over the estimated life of those assets is one of depreciation policy, and I know of no good reason why this policy need be immutable. Under present conditions of known high business activity, I can see some very convincing reasons why it is not only good business but also good accounting to allocate a larger portion of the cost to these periods. In depreciation accounting we have become slaves to periods of time, rather than units of production or use of the assets. Consistency is a word you hear much about in accounting, but its observance is not universally mandatory. Consideration should and must be given to the charging against income of each period of the proper costs of producing this income.

In cases of costs of depreciable assets which do not vary widely from normal costs, and in which the income of the period does not vary between wide limits, then the allocation of the costs of the use of depreciable assets in equal amounts over the expected service life of such does not produce results that are too inequitable. However, present costs of assets are abnormally high, and business activity is also abnormally high. The abnormal costs of acquisition of new or additional depreciable assets were assumed to take advantage of this abnormal business activity, and it seems realistic and equitable to charge these abnormal costs to present operations under some method or other. In fact not to do so, in my humble opinion, would be improper accounting.

Again the following quotation from the special statement by the Committee on Accounting Procedure is pertinent:

"The committee disapproves immediate write-downs of plant costs by charges against current income in amounts believed to represent excessive or abnormal costs occasioned by current price levels. *However, the committee calls attention to the fact that plants expected to have less than normal useful life can properly be depreciated on a systematic basis related to economic usefulness.*"

This problem is covered by Mr. C. G. Blough, CPA, in his article on "Current Accounting Problems" in the October issue of the *Journal of Accountancy*, on page 336.

But I again would remind you that many decisions to buy or construct additional facilities have been based on the expectation of high demand for the next three to five years, during which they expected to be reimbursed for their investment to a considerable extent. In other words, these assets were bought or constructed to meet the extraordinary demand resulting from little or no production during the war. There is no doubt in the minds of some of us that some of these new depreciable assets can become surplus facilities just as soon as the present condition changes. An asset may reach the end of its useful life in more ways than by wearing out. In speaking of this problem, I would like to refer you to page 235 of the Conference Board Bulletin of August, 1947.

The third current problem is that of the reinstatement on the books of fully depreciated assets, in order that some charge for depreciation may be made to present operations for the use of those assets. This problem involves assets which, in pursuance of a systematic depreciation policy, have been written off, and also assets constructed under certificates of necessity which were written off over the so-called emergency period, without regard to the normal service lives of such assets.

It is somewhat difficult to support the suggestion of restoring on the books assets which have been written off in accordance with a planned depreciable policy and which are still usable and being used, in order that some charge may be made to the current operations for the use of such assets, unless the whole depreciation policy is reviewed and proper adjustments made. If these assets have been written off because of too liberal allocations to operations over prior periods, it is reasonable to assume that other assets, not yet completely depreciated, are being depreciated under the same liberal plan, with corresponding high charges to current operations. Certainly, if depreciation charges for assets written off were added to the current charges, there would be a pyramiding of charges against current operations.

Depreciation Policy Should Not Be Immutable

However, if a business decides that it has been depreciating at too high a rate,

or the basic premises on which the depreciation policy was based are changed, I do not see any reason in the world why the depreciation policy cannot be changed, as long as full disclosure is made in reporting. It would seem to me rather dogmatic to say that once a certain depreciation policy has been established, no changes therein may ever be made. The present high price of replacement assets may very well extend the actual service life of assets acquired some time in the past, and justify reconsideration of depreciation policy.

Now, in regard to the restoration of assets acquired under certificates of necessity and written off over the period of the emergency, much more support can be given to this proposition. These assets were not written off in accordance with a systematic depreciation plan, but were written off during the period of the emergency, because of the tax advantage in so doing. If the normal provision for depreciation on such assets is a significant amount, greater distortions of true operating results would occur if no charge for the use of these assets were made than if they were restored on the books and the normal charge for depreciation charged to current operations. For some examples of this practice I would refer you to the National Industrial Conference Board Report of August, 1947, pages 233 and 236.

Obviously, there would not be any tax advantage from the depreciation charges on fully depreciated assets, and some complicated inventory adjustment might be necessary. The advantages and disadvantages resulting from the restoration of fully depreciated assets would have to be weighed in each individual case, and a decision reached applicable to such case.

Problems Are Confusing

The present problems of depreciation accounting are real and most confusing. The difference I see in the situation today from what it was in the twenties is in the higher income tax rates, the fears in regard to the application of Section 102, the greater amount of replacements that have to be made because of low replacement records of the period 1930-1946, the strong likelihood that the increases in costs will prevail longer because of the support to the current scales given by labor, and the increasing evidence and belief that the business volume is going to maintain a new plateau, thus requiring not only replacement of existing facilities, but also the acquiring of additional ones to take care of the increased volume.

In any event, from the various studies that have been made, some of which have been referred to herein, it is most evident that the facts indicate that, at the present time, the abnormalities of the present price situation as they relate to depreciation accounting are being treated in different ways even by comparable businesses. This seems to make it mandatory that every business incorporate in its financial statements explicit definitions of its present depreciation policies and practices. Under these varying conditions the bare statement of the amount of the periodic charge for depreciation is not going to suffice to answer the questions that accounting analysts will ask.

It must always be kept in mind that accounting is not an exact science, and is not governed by any natural or immutable laws. As the subject matter of accounting changes (as it has in the past and will in the future), the consensus of the authoritative thinking of the body of professional accountants will recommend procedures which will give effect to the changed conditions, without abandoning long established and proven accounting policies and practices. In the meantime, irrespective of the pressure of those not of our profession, let us adhere closely to present policies in depreciation accounting, until it is proven conclusively that modification is necessary. After all, it may be only history repeating itself.

A. Emory Wishon

A. EMORY WISHON, executive vice-president of the Pacific Gas & Electric Co., San Francisco, and a member of the Board of Directors of the Edison Electric Institute, died on January 4 at his country home in Danville, Calif. He was 65 years old.

MR. WISHON

Mr. Wishon was a leader in the development of the power industry and in civic and industrial affairs in California. For the last 38 years he was with the PG&E and predecessor companies. He had been executive vice-president in charge of the company's $350,000,000 post-war expansion program since July 1947.

Born in Missouri, the son of A. G. Wishon, one of the pioneers in hydroelectric development on the Pacific coast, Mr. Wishon received his engineering degree at the School of Mines and Metallurgy, University of Missouri.

During his career he served as an executive with the Coalinga Water and Electric Co. in 1909, and introduced electricity into oil well operations. Joining the San Joaquin Light & Power Corp. as assistant general manager in charge of the southern division in 1910, he advanced to assistant general manager in 1913 and to general manager in 1920. To these duties he added the responsibilities of general manager of the Great Western Power Co. in 1926 and served in this capacity, as well as vice-president of both companies, until 1930 when control of them was acquired by PG&E. He then became vice-president and assistant general manager of Pacific Gas and president of the San Joaquin utility, which was operated as a separate unit until 1938.

He was also a director of the board of the 1939 Golden Gate International Exposition, past president of the Pacific Coast Electrical Association, a director of both the California State and San Francisco Chambers of Commerce. He served two years as chairman of the National Electric Light Association committee on customer ownership.

One of the originators of the California Electrical Cooperative Campaign, he was the first exponent of the self-interest plan of financing public utility work locally, a program which created considerable interest throughout the country.

He was a 32nd degree Mason and a member of the Family, Bohemian and Pacific Union Clubs.

The Failure of Marxism*

Both Socialism and Communism, as They Actually Work Out, Betray the Hopes for the Better Life That They Once Inspired

By John Dos Passos

"Ever since the '20's, when he emerged as a major American writer, John Dos Passos has been closely identified with liberal and socialist causes. His novels, particularly *The 42nd Parallel, Nineteen Nineteen* and *The Big Money*, pioneered the school of realism combined with "social consciousness" which was the dominant new note in American literature. He was arrested for his part in the Sacco-Vanzetti protests; he championed the cause of families of coal miners on strike; he was active in groups set up to aid Loyalist Spain. After his experiences in Spain he wrote *Adventures of A Young Man* (1939), a novel satirizing American radicals of the Stalinist variety. In this article Mr. Dos Passos reviews the recent record of socialism, drawing upon his rich experience and in part upon his survey of conditions in socialist Great Britain."

NOT long ago I found myself talking to a pleasant and well-informed woman reporter in a newspaper office in a prosperous city in the Middlewestern corn belt. Although the region is usually chalked up as "black Republican" in politics, the paper she worked for wore a "liberal" complexion. I was trying to explain to her that socialism as I had seen it working last summer in Great Britain was not necessarily a force for progress. "But I thought you were a liberal," she kept saying almost tearfully, "and now you have turned reactionary." "The socialists are the conservatives now," I told her, "and the communists are the real reactionaries." But she remained unconvinced. The reason our conversation was so fruitless was that she had decided that certain words like "liberal," "labor" and "rationing" had a virtuous connotation and there was no way of getting her to look directly at the events that lay behind the words.

It was just this sort of wall of incomprehension you used to meet years ago when you argued the right of working people to form unions and to strike for improved working conditions, or tried to explain that we ought to show a sympathetic interest in the social experiments that were going on in the Soviet Union. Then it was the capitalist slogans that were holding the fort; but during the past 20 years a new set of words has gradually become charged with a virtuous aura in the public mind. Now *public ownership, planned economy, controls* and *socialized* have become words heavy with virtue, while *profits, free enterprise, investment* and even *dividends* have taken on an evil context that needs to be explained away.

The public mind in America that 20 years ago dismissed unheard anything that smacked of a socialistic notion is now receptive to socialistic notions. Partly this comes from a reasoned change of attitude brought about by the success of some of the socialistic measures of Franklin Roosevelt's New Deal, but partly it comes from the unthinking acceptance of the vocabulary of "liberal" propaganda that spread out in ripples from New Deal Washington, becoming vaguer and more confused and more destructive of clear thinking as the ideas that engendered it lost their vitality at the source. It is in this confused region of the popular mind that the communists have been able to carry on their most successful propaganda operations. Thus it comes to pass that the "liberals" who think a man is defeated in argument when they call him a "reactionary" show very little curiosity about the actual functioning of socialistic-going concerns that have come into being in the last 20 years. The "liberal' vocabulary that had some meaning in the 1920s has now become a definite hindrance to understanding events in the world of the '40s.

Exactly 100 years have passed since Karl Marx and Friedrich Engels issued the *Communist Manifesto*, which became the first document in the formulation of modern socialism. Nineteen years later the bible of Marxism, *Das Kapital*, was published, giving immense documentation to Marx's theories that the collapse of capitalism was imminent; that it would inevitably be followed by a socialist utopia.

In the 1920's there were a number of us in the U. S. who were convinced that this doctrine was valid. Those of us who were willing to be called socialists had some definite things in mind that we thought would be achieved if ownership of industry were taken out of the hands of the finance capitalists and vested in the community. We thought public service could be substituted for money profit as the driving motive of human behavior. We thought that with the ascendancy of an anti-militarist working class throughout the world war and the threat of war would be replaced by peaceful cooperation in international affairs. Of course it must be admitted that we were caught by the illusory belief that revolution would install utopia. We were carried away by the blind enthusiasm for a new dispensation at hand that was sweeping the masses of the Western world.

The revolutions have happened and regimes and empires have crashed in the mud, but the old problem of how to control man's domination by man remains unsolved.

Enough socialized systems and institutions have been going concerns over a long enough period of time for us at least to begin to get some idea of how

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they are working out. It's a most curious comment on the blindness induced by dogmatically held beliefs that in all the avalanches of print for and against socialism and free enterprise there's so little comparative examination of capitalist and socialist organizations; there's so little effort to try to discover how they work out for the men and women directly involved.

First let me give an example of a socialized institution that seems to me to have been a success. Rural electrification was one of the New Deal's pet projects. It encouraged the establishment of local committees that gave a much-needed impetus to local self-government in a very important field. Not only did it furnish increased electric service all over the country but by its brisk competition it shook the private companies out of their lethargy, so that they greatly increased their service too.

The Military Socialism

At the other end of the scale in the experience of the average American come the Army and the Navy. We are not accustomed to thinking of the Army and Navy as socialized institutions but that is exactly what they are. We all admit that in the times of ruin and rapine in which we live we can't do without these vast engines for waste and destruction, but I've yet to meet a veteran of either of these services who thinks that the Army way or the Navy way or even the Air Force way is the best way of running human affairs. About the best face we can put on our military establishment is to say that in spite of its cumbrous bungling it has so far managed to defeat our enemies in battle, and that up to now our civilian setup for production has been so monstrously efficient that we've been able to afford the waste of materials and the frustration of individual effort that the military system implies.

As citizens of a self-governing community it is our first duty continually to be asking ourselves what it is we want from our institutions.

At home in America we have seen enough of the working of socialized enterprises, successful and unsuccessful, to begin to understand the basic problem. We must realize that from the point of view of the well-being of men and women the contradiction is not between "capitalism" and "socialism" but between the sort of organization that stimulates growth and the sort that fastens on society the dead hand of bureaucratic routine or the suckers of sterile vested interests. We should by now have learned that the road must be kept open for experiment. We should have begun to learn that no society is stronger than its weakest members. By our habit of government we are committed to trying to keep a rough balance between the demands of different sections of the population. We haven't solved the problem of defending every man's freedom against domination by other men, but we have made a little bit of a beginning.

The Museum Of Socialist Failures

The rest of the world is becoming a museum of socialist failures. Our first problem now is to understand clearly the needs of our own society and its relationship to the shaky socialized regimes of Europe and to the regime of the law of the club that centers in the Soviet Union. To do this we must free our minds of the stale and rotting verbiage left over from the noble aspirations of oldtime socialist theory.

It was failure to see the world clearly on the part of Franklin Roosevelt and his advisers that deprived us of the fruits of our wartime victory to the point that the things Americans hold most dear are in greater peril today than on the dreadful afternoon of Pearl Harbor. The responsibility for this loss of the peace lies not only in the small group of political leaders in Washington but in the whole body of thinking Americans whose thinking had just not caught up with the times.

The basic reason for this national failure was that as a nation we had forgotten that our sort of self-governing community can survive only in a world where new avenues for men's ingenuity and enterprise are constantly opening up and where the areas of individual liberty are expanding. We had forgotten that liberty, like peace, is indivisible. We had forgotten that the only sensible foreign policy for the U.S. was to encourage liberty and oppose oppression.

While not forgetting our own shortcomings, if we are to catch up with the times and to see clearly the hideous world of growing servitude—a world of slavery like chattel slavery in the old South and the slavery of ancient times—which we have helped produce, we must understand the workings of the enemies of liberty and peace. The chief of these, in power and efficacy, is the government of the Soviet Union.

Wilson and Lenin

When the Communist revolution exploded in Russia in the fall of 1917 the first World War had settled down to a stalemate along the trenches in northern France. The stubborn resistance the French were putting up to the equally stubborn German invasion was bleeding Europe to death. Among the rank and file of all the armies the feeling of mutiny against the senselessness of the butchery was rising to desperation. At that time two separate flares of hope appeared on the eastern and western horizons. In Washington Woodrow Wilson announced his Fourteen Points and in Petrograd Lenin and Trotsky fired the hungry and disorganized Russian mobs with the belief that communism would bring them peace, land and food. No one who was in Europe in '17 and '18 can ever forget the surge of crazy confidence in the future that swept the Continent when Armistice Day came and the fighting stopped.

The people's trust in the American way faded as Wilson let himself be trapped into the stale committee rooms of the old men of Versailles, but from Russia came leadership and decisive action. While in Paris they haggled about oil and superannuated boundaries, Lenin let Finland and the Baltic countries form their own governments, let the conscript soldiers go home, distributed land to the peasants and encouraged the formation of workers' soviets, or councils. To many of us at the time these soviets seemed to be a new organ for self-government. For a moment it looked as if the working class under Marxist leadership would succeed in renovating Europe.

It was not to be so easy. The old vested interests of Europe banded together for their own protection; by backing the reactionaries in the Russian civil war they ruined the hopes of free development for the new social system. The Communist party hardened fast into a military caste. The soviets and trade unions in the Soviet Union, instead of developing into organs of self-government, developed into machines run by a tightly organized and fanatically dogmatic Marxist minority for the domination and exploitation of the masses. Lenin threw overboard the humanitarian baggage of Western socialism, an act symbolized in the transfer of the capital from European Petrograd to Asiatic Moscow. The civil war became a struggle for order, any kind of order. The

only order the Russians knew was despotism. From the czarist autocracy the Communist government inherited the secret police. Individual liberty had hardly a breathing spell before it was stamped out again, first in the unorganized mass of the people and then, as Stalin struggled for power against Trotsky, within the Communist minority itself.

By the early '30s the social organization of the Soviet Union resembled much more the slave-run military autocracy of the Ottoman Turks than it did any of the European blueprints for a socialist utopia. This reaction to methods of government that had gradually been losing favor among civilized men for 500 years was accompanied by the building up of one of the most extraordinary propaganda facades in history. A constitution was promulgated on the Western model. The entire vocabulary of Western self-government was borrowed and applied to the machinery of despotism.

Utopia—With Secret Police

By killing off the old European-trained Communists and exiling Trotsky, Stalin cleared out of the Kremlin the last traces of Western humanitarianism. The organization of a free self-governing socialist community, which had been the first aim of the Russian revolutionists, was pushed forward into the future, when the millennium should come. Through the pull of this millennial dream Stalin's regime managed to retain its grip over the aspirations of a large part of the European working class. The Communist party, appealing through this basic utopian dogma to the emotions of confused and tortured people, backed and kept in line by the ruthless and skilfully exercised authority of the secret police, managed to create one of the most efficient machines for the dominating and exploiting of mankind the world has ever seen.

It seems likely, from what we hear faintly through the screen of lies that hems in the Soviet Union, that there the illusions have lost their power in the face of the regime's failure to produce even the rudiments of decent living for its subjects, and that the Kremlin now rules a depraved and exhausted people by brute force. Outside the Soviet Union, however, the utopian illusions of communism still dominate many men's hopes and dreams. Even some Americans opposed to the communists still talk as if it were an excess of progressiveness and idealism that caused Russian socialism to fail. We find Frenchmen and Americans and Canadians, in all other respects apparently capable of sane and normal thinking, who are willing to turn their backs on the traditions they were brought up in and to give their allegiance to the Kremlin, even to the point of committing treason. The success of the aggressions by the Soviet state in the last few years rests in great part on the Kremlin's command over adherents and sympathizers in the outside world. Largely because the rest of the world has not understood it the Russian socialized state has been allowed to develop into a military force for pillage and conquest. Still the faith of many of our "liberals" in the Kremlin's idealistic aims has not faltered.

Those of us who believed in socialism in the '20s hoped it would promote self-government, expand individual liberty and make for a wider distribution of the good things of life. It is obvious even to Mr. Henry Wallace that the Soviet Union is not the place to look for these things. Not even the American communists really claim any of these achievements; what they say among themselves is that present miseries will be atoned for by the regime of justice and bliss that will be established once communism has completed its conquest of the world.

The Russians are barbarians, the Western socialists will tell you; in England it will all be different.

Is British Socialism Different?

How different *is* it? If you go around Great Britain asking questions of as many different kinds of people as possible, as I did last summer, you sense that in its ultimate implications British socialism is turning out to be not so very different from the Russian brand. Of course there's not the gory police terror of Stalin nor the Hitlerian pomp and parade through which the Kremlin daily expresses its power over the bodies and minds of men. There's not the proselytizing enthusiasm of a quasi-religious dogma that accompanies the agents and armies of expanding Russia. There's not the daily and visible and universal servitude; but neither has socialism brought any broadening of personal liberty. On the contrary; personal liberty in Great Britain has been contracted.

The very humane and well-intentioned people who are running the Labor government are the first to deplore the losses of liberty you bring to their attention. They reassure you with pious hopes that the "direction of labor" measure, which limits the individual's right to work where or when he likes, will be only a passing phase. Listening to these pious hopes, I couldn't help remembering similar reassurances from equally humane and well-intentioned Russian communists who used to tell me, in the early days, that military communism was a passing phase which would disappear as soon as reactionary opposition was crushed. Thirty years have gone by, and military communism marches on to fresh massacres. A man has a right to ask the British Labor party whether 30 years from now direction of labor won't be the cornerstone of a new system of exploitation of the productive workers by a new ruling class.

If there is one thing that mankind should have learned from the agonies of the last four decades it is that it's never safe to do evil that good may come of it. The good gets lost and the evil goes on.

Distribution of Poverty

Of course we must admit that the present situation of the people of Great Britain would be difficult enough if a choir of archangels, superhuman in brains and in self-abnegation, had assumed the government. The island's economy was built up as the processing and financing center of an empire which has irrevocably gone. The class that had ruled that economy through control of the government, ownership of the land and domination of centralized finance and industry had become overweeningly rich and powerful. In their wealth and self-satisfaction the owners of Britain neglected to keep their industries tooled up to date or to protect the standard of living of their working people or to conserve their natural resources. When the Labor government came in after the war it inherited a concern that had long been bankrupt.

Government control of virtually the entire economy had already been instituted during the war. About all the Labor government has done is to amplify the wartime apparatus of bureaucratic management. The living standards of the working people who were Labor's chief constituents had improved during the war, and the Labor government has continued that improvement, particularly for the lowest-paid third. Because there isn't enough to go around anyway, this has been done at the expense of the mid-

dle class, traditionally the nursery of British brains and initiative. Virtually everybody has been reduced by high taxes and high prices to the same bare level of subsistence. Incentive for effort and innovation has tended to disappear. A man is better off if he soldiers along in the shop and spends his Saturdays betting on the races than if he works himself sick trying to rise in the world. The more his income rises the more taxation will take his earnings away from him and the more he'll feel the dead weight of the bureaucratic tangle hampering his every move.

Bernard Baruch's remark, that socialism might not succeed in distributing wealth but would certainly distribute poverty, has never been better exemplified. Up to now socialism in Great Britain has accomplished very little more than to freeze the bankrupt capitalist economy at its point of collapse. Its bureaucratic machinery, operating along the lines of the machinery of bankrupt capitalism, has not been able to stimulate the sort of revolutionary initiative and thoroughgoing reorganization of the economy that might give the British people a chance to escape from their dilemma. Socialism has acted as a brake instead of as a stimulus to enterprise.

Man does not live by bread alone, the socialists will tell you. The answer is that as strong as the urge to eat is the urge to exercise power over other men. In the past British institutions have done a moderately good job in curbing this deadliest of instincts. But in spite of political democracy British capitalism too often gave too much power to people whose only social gift was the knack of accumulating money. Now British socialism gives too much power to people whose only knack is getting themselves elected to offices in trade unions. At the same time the liberty of movement and the freedom of action that allowed people to escape from under the heel of the capitalist have been seriously weakened.

The Wrong Leaders

England has a new ruling class. Added to such remnants of the old ruling class as have remained in office through holding administrative jobs in government, industry and the civil service, is an infusion of new blood from the trade-union leadership, leavened by an occasional intellectual who has talked or written his way into office. Now, the main training of trade-union officials is in hamstringing production for the purpose of wringing concessions from the owners for the workers. Neither idealistic intellectuals nor civil service employes have any training in industrial production. The result is that at the very moment when the British people need to throw all their energy into discovering new ways of producing food and clothing and housing and export goods, they find themselves in the hands of a ruling class that is hampered by tradition and training from doing anything effective to stimulate production. In recent months there has developed a tendency to give technicians an increasingly bigger share in policy-making, but on the whole Britain's new ruling class tends to be so blinded by the utopian glamour of the word "socialism" that it has found it difficult to envisage the problem which confronts the nation.

Decline of Initiative

Well if the government can't help them, why can't they help themselves? The British people, in my opinion, represent in themselves at this moment just about the highest development of Western civilized man. In the middle and upper classes you find a higher level of education than we have reached in America. The level of individual skill and craftsmanship in most trades is higher than ours. In the professionally trained part of the population, though there may be some flagging of creative spirit, there's still a great reservoir of first-rate brains. The British people proved themselves to be still a great people by the dignity and discipline with which they fought off the German air attacks during the war. This great highly trained, highly disciplined and civilized nation is in danger of dying of inanition because in all the elaborate structure of the state there are so few cracks left where individual initiative can take hold.

The British will tell you that they are "quite free, quite." But we don't need to believe them. When a man can't change his job without permission from someone sitting at an office desk, when he can't perform any of the normal operations of buying and selling necessary to carrying on a business without a complicated correspondence to secure licenses from the Board of Trade, when he can't appeal to the courts from administrative decisions, when he can be sentenced to jail for refusing to work in the mines, he's no longer a free agent. The Briton still has his secret ballot in parliamentary and municipal elections. He's free because he can vote, he'll tell you. Unfortunately the record of history tends to prove that it's very doubtful whether the vote alone, without economic and personal liberty of action, has ever protected any people against the exercise of arbitrary power.

A sinister footnote to the loss of concern for individual liberty that seems inevitably to follow the socialization of enterprise appears in the growing toleration of new forms of slavery. We are growing used to the stories of the vast slave camps in the Soviet Union and its satellite countries, but it comes somewhat as a shock to find the humane British tolerating the use of gangs of German prisoners to do agricultural labor. In all my conversations with farmers in England last summer I found only one man who disapproved of the practice. The farmers paid the prisoners' wages to the government and the government allowed the prisoners nothing more than pocket money. The farmers found that they got more work out of the prisoners if they fed them a hot meal in the middle of the day, but they didn't seem to feel that the working of prisoners of war in this way constituted a backsliding in civilization; most of them regretted that the prisoners would soon be sent home. The wages of agricultural workers in England have been much improved in recent years and the socialists take justifiable pride in this achievement. The question they didn't ask themselves when they tolerated the enslavement of the defeated Germans was how long a highly paid plowman or tractor operator would be able to compete with slave labor.

Socialism and Serfdom

This brings us squarely up against the dilemma of our time. Under the cover of the dazzle of socialist illusions, and just at the moment when our technology is opening up the certainty of really widespread well-being in material things, the masses of mankind are being plunged back into a regime of misery and servitude such as has not existed in the West since the days of serfdom. We can't go on forever blaming on war damage a situation that results from the fact that socialized economies have not been able to produce. So far the socialized economies, instead of opening up new aspects of self-government and broader reaches of liberty for the individual, have back-

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Falls Rank Second in Industry's Fatal Accidents

By D. C. Stewart
Member, EEI Accident Prevention Committee

IN 1946 the industry's fatality rate dropped to an all time low of 0.41 lives lost per 1000 employees. The six-year record is given in the table below.

FATAL ACCIDENTS PER 1000 EMPLOYEES IN THE ELECTRIC LIGHT AND POWER INDUSTRY

Year	Fatality Rate
1941	0.50
1942	0.51
1943	0.55
1944	0.43
1945	0.53
1946	0.41

Electric shocks and burns continued to claim more lives than any other accident type. In 1946, however, both the number of such accidents and the proportion that they formed of the total fatalities were down somewhat from the preceding year.

Fatal Falls Second Highest

On the other hand, falls of persons were up sharply from the two preceding years. This is shown in the following table:

FALLS OF PERSONS—FATAL ACCIDENTS

Year	Number	Percent of Total Deaths
1944	6	7.3
1945	14	12.1
1946	19	18.1

Increases in manhours of exposure to falls, spent on certain types of work, may have been responsible for at least a part of these changes. But even so, the figures, standing by themselves, command attention.

In the six years 1941 to 1946 inclusive, 83 of 662 fatal accidents (12.5 per cent) were due to falls. These 83 accidents do not include falls which were associated with electric shock. Further analysis of the 83 accidents will indicate where preventive efforts may be applied most effectively.

In the following two tables, falls are listed which occurred on overhead line work. The object or event most closely associated with the fall is indicated in the first list. Job titles of persons who lost their lives are given in the second list.

FALLS, FATAL ACCIDENTS ON LINE WORK

Agencies or Events	
Falling with poles	12
Gaff cutouts	11
Loss of balance or grip on poles or towers	8
Line work in trees	6
Safety snaps	3
Ladders	2
Lineman's platform	1
Misplacing climber	1
Truck, fall from	1
Ladder truck, fall from	1
Crane	1
Insulator pin broke	1
Total	48

Occupations	
Lineman	35
Serviceman	5
Tree Trimmer	3
Troubleman	2
Poleman	1
Electrician	1
Driver	1
Total	48

The first of the two lists shows that any substantial reduction in the number of fatal falls on line work must center around control of 3 principal hazards. These are:

1. Falling poles.
2. Gaff cutouts.
3. Loss of balance or grip on poles, towers, or in trees.

One important control for the first of these hazards is periodic inspection of poles to determine their condition; also, inspection of poles in the field on each job before climbing.

Falls from Poles

Many of these accidents occurred when linemen altered the strain on poles by adding or removing wires. Thorough training in installing temporary guys when needed, or otherwise supporting poles when stresses are altered, will prevent recurrence of many similar accidents.

The avoidance of gaff cutouts, and the use and care of pole climbing equipment have been the subjects of two publications by the Accident Prevention Committee. Careful selection of men who are to climb, and careful training in the principles and safe practices developed in these booklets will do much to control the second and third hazards.

Station Accidents

Of the remaining 35 cases which occurred on other than line work, 31 occurred in generating plants or substations, and 4 in miscellaneous locations. Station accidents are classified in the following tables:

FALLS, FATAL ACCIDENTS IN GENERATING PLANTS AND SUBSTATIONS

Agencies or Events	
Scaffolds	5
Wood platforms	3
Glass skylights	3
Openings in floors	2
Falls on floors	2
Wall, from top of	2
Stairways, steps	2
Crane	2
Coal conveyor trestle	1
Elevator shaft	1
Transformer pit	1
Catwalk	1
Wood beam	1
Grating and pipe	1
Ladder	1
Rotor spoke	1
Flat car	1
Flume	1
Total	31

Occupations	
Engineer	3
Repairman	2
Welder	2
Fireman	2
Mechanic	2

(*Continued on page* 25)

REVIEW AND CLASSIFICATION OF 105 FATAL ACCIDENTS REPORTED DURING *1946* WITHIN THE ELECTRIC LIGHT AND POWER INDUSTRY

Edison Electric Institute—Accident Prevention Committee

(This Summary was compiled from detailed reports submitted to the Institute)

ELECTRIC SHOCK OR BURN 64.7%	LINE WORK ON POLES	CONTACTS ESTABLISHED WHILE CLIMBING OR IN WORKING POSITION BUT WITHOUT CUTTING OUT OR LOSING BALANCE	HANDS	Volts 2400	Lineman	1.Contacted arm brace, energized by jumper to guy wire to brace.
				4000	Appce. Lineman	2.Removing insulator hood without gloves. Contacted line wire.
				2300-4160	Foreman	3.Working dead wire. Live splicing tool struck this wire 2 spans away.
				4000-6900	Lineman	4.Tying in wire. Rubber glove failed. Had been told to wait for sticks.
				6700-12,000	Lineman	5.Changing arresters and cutouts. Manner of contact not established.
				6900	Lineman	6.Transferring arms and raising wires. Reached for arm bolt, touched clamp.
				6900	Lineman	7.Installing new line, removing old. Removed gloves, touched line wire.
				7200	Lineman	8.Connecting dead jumper to live line. Contacted energized circuit.
				7200-12,000	Lineman	9.Removed fuse from cutout with rt. hand, contacted guy wire with left.
				7620-13,200	Lineman	10.Climbed to help other lineman. Contacted 13.2 kv riser. Fell to grd.
				33,000	Lineman	11.Untying tie wire. End contacted brace bolt. Touched the brace.
				Not stated	Lineman	12.Transferring sec. to new pole. While passing wire contacted other wire.
			HEAD OR SHOULDER	2300-4000	Lineman	13.Transferring lines and equipment. Changing position touched disc. sw.
				2300-4000	Appce. Lineman	14.Changing insulators at end of 6 pin arm. Contacted phase wire.
				2300-4000	Troubleman	15.Climbed pole to cut fallen wires. Wire in contact with mast arm.
				2400-4150	Appce. Lineman	16.Replacing pole transferring feeder. Removing tie wire. It struck chin.
				5000	Lineman	17.Replaced insulator. Removed hose. Unfastening safety, touched line wire.
				6900	Lineman	18.Boring holes in dead end corner pole below pri. Touched bottom jumper.
				11,000	Lineman	19.Changing transformer. Contacted 11 kv riser.
				7200-12,000	Foreman	20.Inspecting transformers and taps. Contacted lead to trans.
				7200-12,400	Div. Mgr.	21.Working on trans. bank. Contacted line, fell from pole.
				7200-12,500	Lineman	22.Replaced transformer, line dead. Said was ready for energizing. Touched wire.
				7620-13,200	Lineman	23.Connecting secondary. Tying hand line on arm, contacted "take-off" wire.
			ARMS	1150-2300	Lineman	24.Repairing broken line. Reached for end of new wire. Contact above glove.
				2300	Appce. Lineman	25.Moving trans. alive. Touching guy wire. Wind blew jumper against it.
				2300-4000	Lineman	26.Installing disconnect switches. Contacted wire above rubber glove.
				2400-4150	Lineman	27.Straightening crossarm. Reaching contacted lightning arrester tap.
				4800	Lineman	28.During sagging, wire loosened, touched brace bolt. He contacted brace.
				4800	Lineman	29.Replacing cutout box. Changing position to adjust box, contacted line wire.
				4000-6900	Local Mgr.	30.Pulling up slack in line, contacted end of pri. being pulled.
				7200	Lineman	31.Replacing damaged trans. and cutouts. Cutting dangling wire, touched it.
				13,200	Lineman	32.Preparing to work on secondary. Changed position, contacted fuse switch.
			BODY	110-220	Appce. Lineman	33.Reaching across secondary to untie neutral. Contacted "hot leg."
				7200-12,500	Lineman	34.Replacing insulator. Untying tie wire, touched brace bolt in contact with guy.
			LEG OR FOOT	4000	Lineman	35.Inspecting fuses after storm. Touched control wire in contact with fallen pri.
				2400-4150	Lineman	36.Transferring circuit. Appce. contacted tie wire. Shocked rescuing him.
				5000	Foreman	37.Intended to cut fallen st. lt. wire. Cut lamp lead instead. It fell on foot.
			CONTACT NOT GIVEN	110-220	Appce. Lineman	38.Climbed pole to install rope to pull in pri. wire. Details of contact unknown.
				Not known	Lineman	39.Shocked on "dead" pri. extension by induced voltage from 66 kv line.
			EL. FLASH	2300	Lineman	40.Changing trans's. Connecting W.P. lead, it contacted other phase. Flash.
				2300-4000	Lineman	41.Transferring circuits. Tying in jumper. Tie wire touched another phase.
		GAFF CUTOUTS		2200	Lineman	42.Transferring primary. Cut out, contacted wire beyond line hose.
				2300-4000	Lineman	43.Descending. Cut out fell into pri. Hoses had been installed, but no hoods.
		SLIPS		2200-2400-4180	Lineman	44.Taking voltage and current readings. Slipped and fell into primary.
					Lineman	45.Replacing automatic splice. Slipped on tower lacing, fell into pri.
	LINE WORK FROM LADDER			2650-4600	Foreman	46.Climbed ladder to help pull fallen wire. Touched sec. in contact with pri.
	LINE WORK ON GROUND	STRINGING WIRES		2300-4000	Foreman	47.Pulling up conductors. Guy wire failed. Picked it up. It contacted pri.
		SETTING POLE		2300-4400	Line'n Helper	48.Pole rolled, pushing pri. against steel boom. Leaving truck, touched boom.
		WIRES DOWN		6900	Lineman	49.Pole broken, wires within 70" of grd. Leaving truck, door contacted pri.
		CRANE BOOM		220,000	Towerman	50.Near crawler-type crane. 220 kv line arced to boom energizing ground.
		CRANE BOOM		220,000	Appce. Trimm	51.Same as 50. One of 4 fatalities.
		CRANE BOOM		220,000	Groundman	52.Same as 50. One of 4 fatalities.
		ENERGIZED		7620-13,200	Groundman	54.Rebuilding bus bar installation. No other details given.
		PUSHING		23,000	Electrician	55.Connecting arrester to bus. Allowed wire in hand to contact 23 kv.

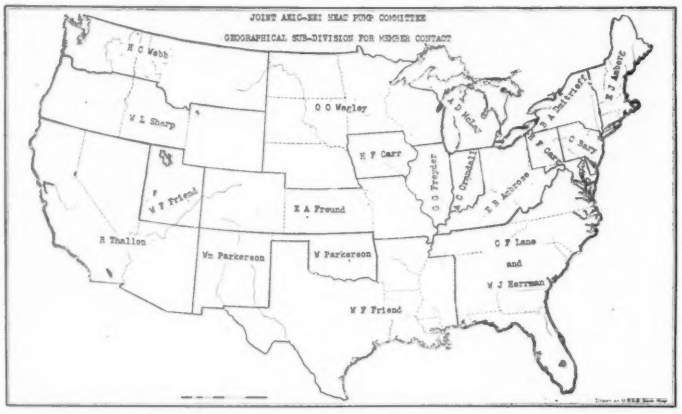
	LINE WORK ON GROUND	STRINGING WIRES	2300-4000	Foreman	47.Pulling up conductors. Guy wire failed. Picked it up. It contacted pri.
		SETTING POLE	2300-4400	Line'n Helper	48.Pole rolled, pushing pri. against steel boom. Leaving truck, touched boom.
		WIRES DOWN	6900	Lineman	49.Pole broken, wires within 70" of grd. Leaving truck, door contacted pri.
		CRANE BOOM	220,000	Towerman	50.Near crawler-type crane. 220 kv line arced to boom energizing ground.
		CRANE BOOM	220,000	Appce. Trainman	51.Same as 50. One of 4 fatalities.
		CRANE BOOM	220,000	Groundman	52.Same as 50. One of 4 fatalities.
	WORKING AT STATIONS ON OR AROUND EQUIPMENT, BUS STRUCTURES ETC.	ENERGIZED BUSES	7620-13,200	Groundman	54.Rebuilding bus bar installation. No other details given.
			23,000	Electrician	55.Connecting arrester to bus. Allowed wire in hand to contact 23 kv.
		ENERGIZED LEADS, RISERS AND CABLES	4000	Assistant Sup't.	56.Climbed ladder to inspect cable terminals. Contacted terminal.
			6900	Electrician	57.Painting cell from stepladder. Slipped and fell on breaker lead.
			13,000-22,000	Painter	58.Painting steelwork. Applied brush to clamp on 22 kv line.
		CIRCUIT BREAKERS	2400-4150	Operator	59.Testing. Either breaker or trans. failed. Burned. Possible switching error.
			2400-4150	Appce. Operator	60.Same as 59. Double fatality.
		DISCONNECTS	2200	Electrician	61.Removing blanket from disc. without gloves. Contacted disconnect.
			2550-4500	Elec. Mechanic	62.Tightening bolt on hot side of disc. Wrench contacted metal barrier. Flash.
			6900	Operator	63.Applied low tension phasing test lamp to live bus knife switch.
			33,000	El. Maint. Man	64.Running bus work. Contacted live side of 33 kv disconnects.
		LIGHTNING ARR'R.	115,000	Lineman	65.Installing jumpers to L.A. gaps. Contacted energized control gap.
		SWITCH	66,000	Sup't.	66.Climbed structure to get data on newly installed switch.
		CURRENT TRANS.	2300-4000	Maintenance Man	67.Feeling with damp gloves for loose connection on current trans.
		RESISTOR	280-440	Hydro Operator	68.Tracing water line. Contacted resistor terminals while in actuator cabinet.
FALLS 18.1%	LINE WORK	GAFF CUTOUT		Serv. Helper	69.Climbing, hook entered deep crack in pole. He cut out and fell.
		GAFF CUTOUT		Lineman	70.Changing position on pole badly cut up by repeated climbing. Fell 30'.
		GAFF CUTOUT		Line'n Helper	71.Changing position on pole. Cut out or failed to connect safety properly.
		FALL FROM POLE		Driver	72.Climbed stepped pole to put wire over arm. Fell from tel. cable 14'.
		FALL FROM POLE		Troubleman	73.Climbed pole to fuse a station. Fell. Reason unknown.
		FALL FROM TOWER		Lineman	74.Releasing rope from end of tower crossarm. Slipped and fell 76 ft.
		FALLING POLE		Lineman	75.Preparing to lower transformers. Pole, set in loose ground, fell.
		FALLING POLE		Lineman	76.Cut one service wire. Insulator on other service wire broke. Pole fell.
		FROM TREE		Helper	77.Trimming trees. Fastening safety fell from limb of tree.
		FROM TRUCK		Lineman	78.Repairing trolley using tower truck. Fell from cab of truck to street.
	POWER PLANT	SCAFFOLD		Mechanic	79.Sand blasting boiler tubes. Fell from scaffold 40-50 ft.
		SCAFFOLD		Maint'ce Man	80.Nailed planks together to increase length of scaffold. Nails pulled out.
		FLOOR OPENING		Electrician	81.Removed grating for crane to lift object. Watching crane walked into opening.
		GRATING AND PIPE		Meter-Reader	82.Handing welding rods. Climbed from grating to pipe. Missed footing.
		LADDER		Fireman	83.Sweeping under side of grating of "cat walk." Fell from ladder.
		ROTOR SPOKE		Foreman	84.Making rotation test on unit. Standing on rotor spoke. Fell.
		FLAT CAR		Brakeman	85.Switching. Riding flat car. Runaway cars struck. Fell under wheels.
	BUILDING	WINDOW		Sales Sup'r.	86.No witnesses. Complained of "stuffiness". Opened window. Fell 5 stories.
	POLE YARD	CRANE		Poleman	87.Transporting poles. Riding crane. Fell forward and under wheels.
MOTOR VEHICLES 7.6%	HIGHWAY	TIRE BLOWOUT		Engineer	88.Driving into rt. hand turn, tire blew out. Car skidded and rolled over.
		SKID		Serviceman	89.Returning from appliance servicing. Truck skidded, struck tree. Fire.
		COLLISION OF VEHICLES		Maintenance Man	90.Other car turned as though to leave highway then back suddenly. Collision.
		CHILD IN STREET		Troubleman	91.Left highway to avoid striking child. Thrown out of the truck.
		ON FOOT, STRUCK BY CAR		Lineman	92.Standing off road, night. A car left the road, struck man and truck.
	RR CROSS'G.	COLLISION		Lineman	93.Patrolling line. Drove his patrol car in path of passenger train.
	FIELD	TRACTOR OVERTURNED		Mechanic	94.Using winch on caterpillar. Track blocks gave way. Ran over bank.
		TRUCK AND BLDG.		Foreman	95.Line work. Backing truck. Man caught between truck and church bldg.
STRUCK BY 4.8%	LINE WORK	GIN POLE		Groundman	96.Tractor pulling gin pole, winch in gear. Pole fouled with winch, struck man.
		FALLING DERRICK		Foreman	97.Lifting pole. Derrick fell because of a missing cotter pin.
		FALLING POLE		Helper	98.Removing old pole. It fell. Helper ran, but ran under pole.
	PLANT	EXPLOSION		Operator	99.Opening valve to supply gas to ignite coal burners. Explosion in meter.
	BLDG.	CANOPY		Appce Lineman	100.Installing meter and service on new concrete block bldg. Canopy fell.
CAUGHT IN 1.9%	PLANT	TRIPPER		Operator	101.Operating coal tripper. Rt. arm caught in tripper.
	PLANT	BUNKER		Yardman	102.Apparently went to bunker to do some trimming. Found buried.
DROWNED 1.9%	BAYOU	BOAT		Surveyman	103.Surveying a line. Crossing a bayou, boat was overturned.
	RIVER	BOAT		Laborer	104.Crossing river, flat bottom boat. As outboard motor started boat overturned.
STRUCK AG.	OFFICE	DRAFTING TABLE		El. Engr.	105.Walking around corner of table. Bumped groin on corner. Complications.

Compiled for the Edison Electric Institute
Accident Prevention Committee
by D. C. Stewart, December 1947

Members of AEIC-EEI Heat Pump Committee Establish Zones to Gather Field Test Data

THE Joint AEIC-EEI Heat Pump Committee, since its formation during the late summer of 1947 by the Board of Directors of the Association of Edison Illuminating Companies and Edison Electric Institute, has held two meetings to date and a third is scheduled for February in Cleveland.

At the first meeting held September 4, 1947, in New York City, the committee outlined its immediate objectives and formulated plans for getting the program under way (EEI BULLETIN, September 1947, page 330). The second meeting was held November 19 and 20, 1947, in Indianapolis, Ind. As part of this meeting, the committee members visited six residential heat pump systems, three using ground as the heat source and three using well water, and also made an inspection tour through the factories of the Muncie Gear Works, Muncie, Ind., and the Airtemp Division of Chrysler Corporation, Dayton, Ohio, in order to familiarize themselves with the operational and maintenance difficulties of actual installations and with the various equipment design and fabrication problems facing the manufacturers.



Zones and Joint Heat Pump Committee members assigned to each subdivision who will maintain contact with electric utilities to disseminate information and gather field test data on the heat pump

Date_____
By_____

JOINT AEIC-EEI HEAT PUMP COMMITTEE
INSTALLATION AND FIELD TEST DATA ON HEAT PUMP SYSTEMS

1. Location (City)_____ Utility Company_____
2. Owner_____ Bldg Usage_____
3. Equipment Manufacturer_____ Contractor_____
4. Type and Serial Number_____ Date Initial Opera_____
5. Rated Capacity, Btu per hr: Heating_____ Cooling_____
6. Motor Rating, Hp: Compr____ Fans____ Pumps____ Other____ Total_____
7. Heat Source_____
8. Space Served: Type Structure_____ Vol, Net Cu Ft_____
9. Design Conditions: Heating Cycle, F db, Outdoor_____ Indoor_____
   Cooling Cycle, Outdoor____F db____F wb, Indoor____F db____ % rh
10. Calculated Load, Btu per hr: Heat Loss_____ Heat Gain_____

Test Data

		Heating	Cooling
	Date.....		
11. Conditioner Coil:	Air quantity, cfm.....		
	Entering temp, F, db - wb.....	-	-
	Leaving temp, F, db - wb.....	-	-
12. Ventilation Air:	Quantity, cfm.....		
	Entering temp, F, db - wb.....	-	-
13. Compressor:	Head pressure, psig - cond temp, F..	-	-
	Suction pressure, psig - suction Temp, F.....	-	-
14. Refrigerant Liquid Subcooling Coil:			
	Liquid temp, F, entering - leaving..	-	-
	Gas temp, F, entering - leaving.....	-	-
15. Condenser-Cooler:	Water or air quantity, gpm or cfm		
	Temperature, F, entering - leaving..	-	-
16. Electric Power Requirement, kw:			
	Compressors.....		
	Fans (describe)_____		
	Pumps.....		
	Other (describe)_____		
17. Capacity Obtained, Btu per hr: (output)			
	Sensible.....		
	Latent.....		
	Total.....		
18. Coefficient of Performance:			
	Based on Compressor Motor input kw..		
	Based on total input kw.....		

19. Comments:
    a. Operating features_____
    b. Difficulties experienced_____
    c. Suggested improvements_____
    d. Other_____

Summary form for recording heat pump field test data sent to executives of EEI member companies. To date 127 installations have been reported in 28 replies to the questionnaire

One of the immediate objectives of the Joint Heat Pump Committee is the assembly, analysis and correlation of test data on existing heat pump installations, so that it can be disseminated to the industry in an understandable and useful form. The first step in this direction was the preparation of a summary form for the recording of field test data. This form, reproduced here, gives the type of test data required in order to determine the heating and cooling output of the system as well as the performance factor. This form, together with a letter of explanation, was sent to the Board of Directors of AEIC and to the chief executives of member companies of EEI as an attachment to H. S. Bennion's October 15, 1947, letter. Twenty-eight replies to this letter have been received to date reporting 127 installations.

In order to be better able to assist the various electric utility companies in the compilation of the requested field data and in the formation of plans for heat pump research and development, each committee member has been assigned to a definite area of the United States. The sub-division, together with the name of the committee member identified with each area, is given on the reproduced map of the United States. Each committee member will contact the electric utility companies in their respective areas in the very near future in order to keep them informed on the progress which is

(*Continued on page* 25)

A New Year's Message to Employees and Customers

By Thomas W. Martin
President, Alabama Power Company

A radio speech addressed to employees and friends of the Alabama Power Company over a 15-station hook-up in Alabama on January 2, 1948

With a radio talk to company personnel, Thomas W. Martin, President, Alabama Power Company, ushered in a new year in that company's history and its public relations program. Over a 15-station hook-up that covered the entire service area of the company, Mr. Martin broadcast his message which was primarily directed to company personnel as a friendly one-way chat about the company's record of achievement in the past year and its plans for the future. The broadcast also reached into the homes of many of the customers of Alabama Power.

The following pages reproduce Mr. Martin's speech as it went over the air. The opening paragraphs introduce Mr. Martin to the listening audience.

"AT this time this station and an Alabama network will carry a New Year's message to Alabama Power Company's employees and their friends by Thomas W. Martin, President of the Company since 1920 and identified with it for 35 years.

"Alabama Power Company is recognized as one of the most progressive in the United States. It is one of the pioneers in rural electrification, having begun this work almost 25 years ago. Much of the industrial development in Alabama has resulted from the Company's efforts in this field. Important technical improvements in the transmission and distribution of electric power have been developed by its engineers. Its rates for electric service are among the lowest in the nation.

"As President of Alabama Power Company, Mr. Martin has been honored on many occasions in Alabama and the South for his public activities and for his attainments in the fields of science and industry. He is Chairman of the Board of the Southern Research Institute. Recently, after a nation-wide poll conducted by *Forbes Magazine*, a national business publication, he was named one of the 50 foremost business men in the United States.

"I present Thomas W. Martin, president of Alabama Power Company, in a special state-wide broadcast to the Company's employees and their friends:

MR. MARTIN'S SPEECH

"On this the 2nd day of the New Year, it is with pride that we extend to our 4400 employees appreciation for their loyalty and fine work of the year just ended. To our more than 270,000 customers and to the additional 200,000 customers served indirectly, we extend our thanks for their patronage and for their good will. Perhaps too, it is well to reaffirm our faith in the capacity of our State of Alabama for further industrial development, and hence for growth and further advancement and the raising of the standards of living of its people.

"In many respects, 1947 was the most important year in the Company's history. It required the greatest skill and the loyal devotion of the entire organization in its many problems and especially in the production and distribution of power throughout the Company's system. The largest electric power demand in our history was successfully met by our Company in December, the period of greatest use of electricity. The demand was greater than was anticipated at the beginning of the year; and there is every reason to believe that we will be called on to maintain a very high demand for the present year. All of this reflects industrial activity in our State, and in addition, it reflects the service directly and indirectly to increasing numbers of citizens of our State, both in the rural and urban areas.

"We are all proud of the accomplishments of the Company which were made possible by your loyal support, not only through the past year but through the former years. The service of the Company is not the work of any single person, but is the result of the composite efforts of all the employees, working as a team. The cooperation and forebearance of our customers and the public in general has had no small part in our growth and development. To our organization these things should be an added incentive to achieve greater things and to render better service. Today our service to the public is not confined just to furnishing electricity, but extends to many activities of society and business in general. I am proud of the fact that so many of our employees are rendering valuable 'plus services'; that is, they are taking part in many civic activities, particularly those having to do with the general welfare of their communities.

Hard Work and Intelligent Effort

"In this work, all have helped and you can take great pride in your part in rendering this essential service. It has been under conditions only slightly less trying than those existing during the war, and was the result not only of good planning, but of faithful devotion to duty. No one will ever know the amount of hard work and intelligent effort which was necessary to maintain the service. While the scarcity of certain materials and items of equipment continues, service was extended last year to 35,000 additional customers, including nearly 18,000 rural customers, and the system of the Company was strengthened so as to extend the service to many others and to render even better service, if that be possible, than we have rendered in the past.

"It is with regret that we were unable to serve all who have made applications to our Company for service, but we are making a determined effort in this year of 1948 to reach this large group just as quickly as possible. Throughout its history, our Company has endeavored to

attract new industries to our State. In this work we have cooperated with the State Planning Board, the State Chamber of Commerce, local Chambers of Commerce, banks, railroads and other groups interested in bringing about further industrial development. The work has been fruitful. During 1947, more than 125 new *manufacturing* plants have located in the area served directly and indirectly by us. They represent capital investment of many millions of dollars and will provide nearly 12,000 more *industrial* jobs for Alabamians. This is in addition to the hundreds of new stores, new shops and new service establishments, which have resulted from our industrial growth, and which have provided jobs for additional thousands of our people.

"In this group are such plants as Coosa River Newsprint Company which will produce newsprint and other pulpwood products at Childersburg; Allis-Chalmers Manufacturing Company, which will produce farm machinery at Gadsden; Goodall-Sanford, Inc., making men's suits at Talladega; the Vanity Fair Mills at Monroeville and Jackson; Hazel-Atlas Glass Company, now building a plant at Montgomery for the manufacture of glass containers; and Blue Bell, Inc., now beginning a large plant at Oneonta for the manufacture of overalls. Each represents a *type* of industry *new* to Alabama.

"To them and to all our other new industries we extend our welcome, and our best wishes for the years ahead.

New Industry, New Jobs

"As we begin a new year of this industrial development activity, we can look back with genuine pride upon what has been done. We have been willing to take part in persuading these industries to establish themselves in our territory because we feel that we should engage in every reasonable effort to create new jobs and new opportunities for the people of Alabama; and because we feel that the citizens of Alabama will accord them fair treatment. We hope in the future that we will be even more successful in the work.

"A pension retirement plan has been established by the Company for the benefit of its employees, which supplements the Federal Old Age Pension, and at the end of 1947, 27 employees of the Company had been retired under the plan. Funds deposited by the Company to the pension fund are now in excess of $1,350,000. There were 2258 employees covered by the plan on June 30, 1947, that date being the end of the fiscal year of the plan. It is interesting to observe that the amount contributed to the pension fund by the Company is equal to approximately 10 per cent of the amount paid in salaries and wages to the employees covered by the pension plan.

"Our generating plants last year produced something more than three billion, eight hundred million kilowatthours, an all-time high. During the year, over 485,000 tons of coal were mined at our Gorgas Mine, which with purchases from other coal mines in Alabama, enabled our steam plants to generate about one-half of our total requirements.

"Construction of the new steam plant at Gadsden was begun and has progressed as rapidly as the supply of materials would permit. Our total gross revenues for 1947 were the greatest in the history of the Company. However, due to increase in costs, our total operating expenses were also the greatest in our history.

"Our tax bill for the year was in excess of $7,000,000 of which approximately $1,250,000 went to the counties and municipalities for schools; and payrolls averaged about one million dollars per month.

"We spent in 1947 approximately $14,000,000 for plant additions, including the Gadsden steam plant; and for new lines, substations, warehouses and other facilities.

"During 1948 Alabama Power Company expects to spend 38 million dollars for operating expenses and construction. This represents the largest total expenditure for these purposes in the history of the Company, and will play an important part in the economy of the State.

"Total construction expenditures alone in 1948 will be approximately 17 million dollars, in contrast with 14 million in 1947.

"Looking to the future, I personally feel that the golden opportunities of the South lie ahead, but electric service is essential if we are to realize on these opportunities of the future. Many additional jobs will be created in the varied types of new industry and also in our Company as we extend our service and enlarge our system.

"Much has been done to improve the standards of living; our educational system is better than it has ever been at any time in the past; industrial research is becoming an important part of the economy of the South through the efforts largely of Southern Research Institute. All of us can take pride in the fact that our Company has both directly through its service and indirectly through its tax payments, had a large part in bringing these things about.

"For 1948 we shall need a large amount of new capital to enable us to go ahead and fulfill our obligations to meet present demands and to be in readiness to meet the demands of the early future. We can only meet this particular obligation with the help and good will of our customers and of all of our organization in doing even a better job than in previous years. Let us rededicate ourselves to this great public service and thus assure our customers and friends that the Power Company family of over 4400 employees will do their utmost to meet the public obligation which rests upon them.

"May the New Year bring to all of you those things you treasure most, and to all of us a greater opportunity to serve Alabama."

The Failure of Marxism

(*Continued from page* 14)

slid with dizzy speed into aboriginal oppressions. In the Soviet Union, failure to solve the problems of production at home has thrown Russian communism into a dangerous habit of aggression upon the rest of the world. As for Great Britain, we can hope that they will find a way to combine socialism with liberty, or at least that the failure of the socialized economy to provide its people with a decent life at home will produce a new explosion of British migration and colonization that will transmit to the future world of the West the valuable heritages of English culture. In America what we don't want to forget is that we won't have any Western world fit for a free man to live in unless we keep the avenues open for the freedom and growth of the individual man in the constantly proliferating hierarchical structure of modern industry.

Socialism is not the answer to the too great concentration of power that is the curse of capitalism. We've got to do better than that.

Factors in Good Personnel Administration

By Guy W. Wadsworth, Jr., and E. H. Adriance

Vice-President, Southern Counties Gas Co. of California, and Manager, Personnel Research Dept., Eli Lilly & Co., Indiana, Respectively

Originally prepared for the Army Service Forces by Mr. Wadsworth, this article was adapted by Mr. Adriance for his company's use in a training program.

THE personnel management job may be defined as creating and maintaining a good working force. The personnel job as thus defined is a managerial function—a part of management itself at the top level and at all lower levels in both staff and line departments. It means securing the right people after having reasonable evidence that they are actually needed, developing their useful abilities, supervising them so as to get a full day's work, continuously keeping them properly placed, properly paid, and wanting to work for the company.

The Idea Behind Personnel Management

The "idea of personnel work" is that money prudently spent to insure wise decisions in the handling of employees at all levels in the organization is not "spent" but is "invested" in the maintenance of the company's most valuable asset—its personnel.

The corollary of this idea is that the company derives substantial dividends from the practice of keeping its working force in good "working" order; such dividends can ordinarily be measured only generally in terms of efficiency, or output per employee, ability of the organization to accomplish new jobs successfully, receptiveness of employees to changes, low controllable turnover, low waste and accident losses, a grievance experience which is in general mutually satisfactory, and lack of work stoppages caused by labor difficulties.

Personnel Administration as Part of the Total Job of Management

Personnel administration is a major function and responsibility of top management. It has not always been recognized as such, and is sometimes regarded as merely an accessory function, serving ends which are peculiarly its own. Nevertheless there has never been a time when the total management job of making an organization or an enterprise successful has not depended in major degree upon an effective working force, or in which management could disregard matters which have a bearing upon the effectiveness of personnel, except at the expense of the enterprise. This is true whether the damage is considered in terms of current achievement or profit, or in terms of borrowing trouble for the future.

Certainly no one, at this time, will question the proposition that a full measure of success in running an organization or a business cannot be achieved in face of a poor personnel job. To this we can add the collateral proposition that a competent personnel job must stem from management, because no one below top management level can lay out and place in practice ground rules for any job which applies to the whole of an organization. The responsibility for the total job rests at the top, and responsibility for every major phase of the job is at the top, and as such can be delegated, only in the sense that the official designated to handle any function of importance acts for the top man.

Realistic Analysis of the Total Job

Of what does the necessary management thinking, as applied to personnel administration consist? First, it requires a realistic analysis of the total personnel job, itself. It should be obvious that only a very small portion of the personnel assignment can be accomplished by merely running a personnel office successfully as a work shop. The bulk of the personnel job is carried on in the operating organization where people are physically located, and where the relationships which ultimately determine the effectiveness or ineffectiveness of the working force are developed. The supervision of transactions which take place in the personnel records section involves essentially management of an office. It is not personnel management, nor is it the summation of the personnel job.

Personnel management is accomplished only by effective guidance of every personnel transaction within the installation, and every dealing on the job which shapes the working environment and attitude of the employees, and which has a bearing upon getting results from the employees of the installation. It requires adequate performance by each supervisor of the part of his job which consists of dealing with people, from the moment people go on the job, through the entire course of their employment.

Public Relations Example

An illustration may be drawn from the traditional attitude of business people toward so-called public relations. Fifty years ago goods and services were thrown at the public on a take-it-or-leave-it basis. The customer was merely the individual who absorbed the products or who used the services of the firm, and who made it possible for the business to exist, but it wasn't worth the trouble to pay attention to him. Then a series of happenings brought home the point that "the public be damned" was not a good motto or frame of mind in which to conduct a business. Industry developed ideas of "public relations," which at the outset prompted setting up a special activity, more or less outside the main stream of the business, in which some personable executive specialized in passing out cigars and in other efforts to make friends for the business.

However, such "Public Relations" activities were not very successful, and it became evident that if the public reaction to the thousands of individual contacts incident to transacting the regular business of the firm were not, on the whole, favorable, there was no sleight of hand performance through which even an able public relations man could correct a really bad public impression. Today, public relations management is directed toward developing a courteous and constructive treatment of the individual transactions which make up the sum total of dealings by the firm with the public.

The situation in personnel management is exactly parallel. The personnel

officer cannot bring into being an effective working force by merely being "personnel minded" himself, or by running an office which is reputed to take care of the personnel transactions of the installation. The personnel job which really counts is carried on between supervisors and their subordinates in day-to-day dealings where the work goes on. Unless the personnel job is made to function at the working level in such a way as to create an agreeable daily environment, and one which induces the employees to perform at capacity and makes them want to stay with the organization, no real management job is being done.

Thus, the first step in developing adequate personnel administration and making it function as part of management is to recognize what the total job is, and where it is, in major part, performed. The second step is to shape each activity which is a part of personnel administration to make it operate at the working level, so that it will function as a tool of the operating supervisor in his daily dealings with his people.

Getting Acquainted

This means that positive steps must be taken to get acquainted with the operating management, to get supervisors acquainted with their personnel job, and to furnish actual guidance in connection with every activity and every practice which affects personnel to everyone in the installation who exercises managerial or supervisory authority. The third step is to develop a sound knowledge of the work force if not actual acquaintance with the employees themselves, so that the viewpoint and problems of the man on the receiving end of all personnel activity will be adequately taken into account in shaping the overall management activity which is directed toward developing and retaining an effective working force.

Admittedly this is a tall order, but it is a necessary perspective. The personnel man who believes that his job can assume management proportions when run from within his own office is merely deluding himself. He is, in fact, isolating himself from the job. Unhappily, no one within the installation is likely to tell him what his total job is, and by tradition, top management may not expect more of him than is involved in seeing that we give our employees a fair deal. But if he has a workman's pride in his job, and wants to develop a program of management stature, the personnel man will take hold of the responsibility and see to it that everything possible is undertaken to get a real personnel job done not only within his office, but by every supervisor in the installation.

Personnel Manager and the Supervisor

How can this be accomplished within the practical situation in which the personnel representative works? There is one essential which must dominate the thinking of the personnel representative irrespective of the particular part of the job which he may be engaged in putting across. That is that there is implicit within his assignment an inherent right and obligation to be concerned in all activities within the installation which have a bearing upon development and retention of an effective working force.

He may not necessarily exercise final decision in all personnel matters, and it is important in connection with some of them that he should not do so. The job goes better, for example, when the supervisor has a final choice of workers, a voice in placement, and so on. But the personnel representative should become the best informed person in his area regarding its personnel needs, the actual state of the personnel job and the nature of all activity which affects relationships on the job.

One effective and usually acceptable approach to the supervisor in discussing personnel matters with him is one in which the personnel representative is concerned, not in how well the supervisor is doing his part of the personnel job, but in the effectiveness of the services rendered by the personnel office. For example: "We have hired a lot of people for you; how are they working out?" or "Are the people you have staying on the job, and how many are you likely to need over the next three months?" This approach is well chosen as there is an obvious recognition of the supervisor's position, as the responsible head of a section of the working force.

If the personnel representative recognizes the fact that the supervisor should be made to feel that the interest of the personnel representative in his shop does not imply interference with his being "the boss," the ground work is laid for future exchanges in which the leadership in smoothing out rough spots in personnel relationships will receive very practical recognition. The personnel representative needs merely to observe common sense in initiating inquiries in a way which does not suggest that the supervisor, rather than the personnel requirements of his shop, is being "looked over."

There are other effective approaches through which the personnel representative can accumulate the information he needs to develop an adequate management job, but they have in common one feature of importance. The personnel representative will never get close to the job, or determine the actual state of the personnel within his area, or know where a better job needs to be done in developing and retaining an effective working force, by staying in his office and exchanging memorandums or telephone calls with the operating supervision.

Direct contact, and that alone, is the only process by which the personnel representative can really "get together" with the operating supervisors, and actually stimulate their interest in the part of the personnel job which they necessarily perform. It hardly needs to be added that the personnel representative cannot guide the supervisor's personnel dealings, if he does not know what they are, or what the supervisor's slant on the job is, or what the supervisor needs to know in order to do a better personnel job in direct dealings with his subordinates.

In short, sound and effective personnel management goes beyond what can be accomplished by providing good counsel, general statements of policy or even special training to the supervisory organization. It requires a systematic program of inquiry into what actually happens on the job, either in consequence of, or in spite of, the adequacy with which guiding principles have been spelled out.

Until the personnel man is posted on what actually occurs at the working level which affects personnel relationships, he has no real knowledge of his job. Therefore it is very important that special attention be given to methods of determining what the personnel situation is, and what kind of a personnel job is performed in the operating sections and departments where the effectiveness of the total working force is ultimately determined.

Like any other representative of top management, the personnel representative needs a valid charter to perform the kind of a job which has been described. He does well to let that charter come into being as a consequence of sound

(*Continued on page* 25)

Key Operated Resetting Device for Cumulative Demand Registers Aids Meter Reading

By C. V. Morey
Assistant Meter Engineer, and
A. W. Fyfe
Manager—Methods Bureau
Consolidated Edison Company of New York, Inc.

INDICATING and cumulative types of demand registers are normally provided by the manufacturer with a sealable reset lever. Each time a reading of the demand register is made it is necessary for the meter reader to break the seal, operate the reset lever, and then reseal the lever.

The Company seal affords protection against tampering with the maximum demand reading. This is particularly important for the indicating type demand register since, if the maximum demand pointer is tampered with and moved down the scale from its proper position prior to the meter reader's call, the indicated maximum demand reading will be less than what was actually incurred by the customer and a loss of demand revenue to the Company results.

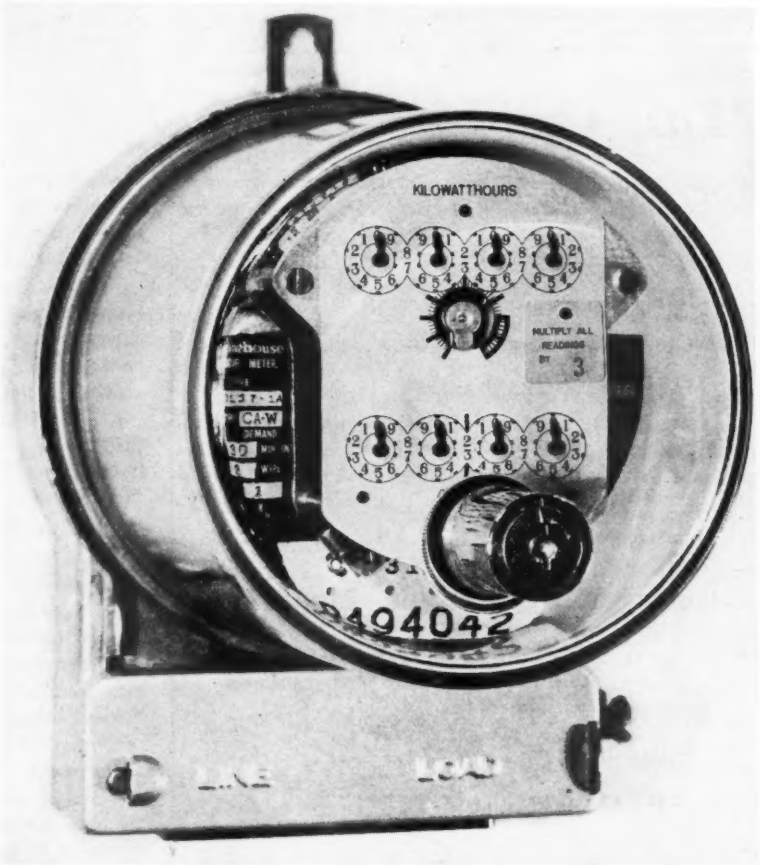
One of the inherent and outstanding advantages of the cumulative type of demand register is, that no reset operation can be performed which would lower the indicated demand registration. Any operation with the reset device can only result in the accumulation of the maximum demand stored within the device since the previous reset operation and its addition to that demand reading already shown on the demand dials. Since any unauthorized attempt to reset the cumulative demand register can not result in a lower indicated maximum demand, it was felt that the particular reason for using numbered seals on indicating type demand meters did not apply to cumulative type demand meters.

In place of the reset lever and the seal it was felt that adequate protection and greater economy in meter reading time would be provided by the use of a lock controlling the reset lever on cumulative type demand meters. The economy of time to the meter reader from the use of the lock results from the elimination of the necessity for the meter reader to break and remove the seal and to reseal the meter, for which purpose the meter reader must be provided with seals, and depending upon the type of seal, cutters and sealing tools.

In order to develop a satisfactory lock control reset device for cumulative type demand registers, the Meter Engineering Bureau of the Consolidated Edison Company of New York, Inc. undertook such a study in 1939. The developmental work was carried on with the cooperation of Meter Manufacturers and the Illinois Lock Company. As a result of the coordination of these efforts, a lock barrel was developed which would fit into the glass meter case of cumulative type demand meters in place of the manual reset lever and its shaft. (See cut).

The new lock barrels used by the Consolidated Edison System although obtained from a number of meter manufacturers, are all operable by a single key even though the reset mechanisms perform different types of operations with the various makes and types of demand registers. The locks are ratcheted so that the key can be turned only in a counter-clockwise direction. The locks are also designed so that the key, once it has been inserted and turned slightly, cannot be removed unless the resetting operation is completed and the key returned to its

(*Cont'd on p.* 31)



One of the new electric meters used by the Consolidated Edison System with cumulative demand registers, showing the lock barrel whose key operates the resetting device

14th Annual EEI Sales Conference Scheduled for Chicago, April 6-8

THE 14th Annual Sales Conference of the Edison Electric Institute will be held at the Edgewater Beach Hotel, Chicago, on April 6-8, Ralph P. Wagner, Chairman of the EEI Commercial Division General Committee, has announced.

The Residential, Rural, Commercial and Industrial sections of the Commercial Division will open the conference, with four separate meetings on Tuesday, April 6, for intensive discussion of sales problems in these specific fields.

The conference General Sessions will be held on Wednesday, April 7, and in the morning of April 8. The conference will conclude with a luncheon session on April 8.

Four prize awards will be made to electric companies achieving distinction in as many fields during 1947, Mr. Wagner said. These are the George A. Hughes Awards, for electric cooking promotion; the Augustus D. Curtis Awards, for outstanding commercial lighting installations; the Laura McCall Awards, for successful home service activities, and the Thomas W. Martin Award, for progress in farm electrification.

Leading sales executives of the utility companies, electrical manufacturers, and other industries will address the conference, Mr. Wagner said. Attendance will approach 1,000, and will set a new record for these conferences, he predicted.

Last Call — for Award Entries

Your Entry for the

GEORGE A. HUGHES *Electric Cooking Awards*

AUGUSTUS D. CURTIS *Commercial Lighting Award*

THOMAS W. MARTIN *Farm Electrification Award*

Must be Received at EEI by FEB. *1st, 1948*

Entries for the

LAURA MCCALL *Home Service Award*

Must be Received at EEI by FEB. *15th, 1948*

Awards will be presented at the 14th Annual EEI Sales Conference, Edgewater Beach Hotel, Chicago, April 6-8, 1948. For further information on these awards, contest rules, etc., address the

Commercial Director

EDISON ELECTRIC INSTITUTE

420 LEXINGTON AVE. NEW YORK 17, N. Y.

CVPS Man on SEP Cover

UTILITY operating men who saw the January 10 *Saturday Evening Post* cover painting of a typical lineman

making repairs on a power line in a rural area must have been impressed with the realism and technical accuracy of the artist's portrayal. This accuracy was not accidental, according to officials of the Central Vermont Public Service corporation whose line foreman for the Bennington area, Howard Stevens, is the central figure in the painting.

To assure accuracy of portrayal, E. M. Chase, safety director of CVPS, cooperated with the *Post* artist, Mead Schaeffer. Chase stated that Central Vermont guards zealously the safety practices which earned in 1947 the Company's safety record of only two lost-time accidents totaling 15 days among all its line crew personnel. The Company serves some 50,000 customers on 3140 miles of distribution lines in southern, central and northeastern Vermont and western New Hampshire.

The *Post*, in its editorial comment regarding its January 10 cover, says, "Electricity is so widely used in farming these days that it has become almost as essential as rain." The artist who painted this cover receives rural electric service from and depicts a lineman of the power company which last year won the Thomas W. Martin Rural Electrification Award. Presented annually by the EEI to an electric operating company, the award is made for "the greatest contribution to the progress of rural electrification and agricultural advancement within the company's territory."

Falls Rank Second in Industry's Fatal Accidents

(*Continued from page* 15)

Lineman	2
Electrician	1
Hoisting Engineer	1
Dredge Operator	1
Stack Repairman	1
Janitor	1
Stockman's Helper	1
Coal Yard Operator	1
Carpenter	1
Guard	1
Wireman	1
Laborer	1
Painter	1
Car Cleaner	1
Maintenance Man	1
Brakeman	1
Meter Reader	1
Superintendent	1
Foreman	1
Total	31

We notice at once from these tables that the hazards are distributed widely through the plants and among a very large number of job classifications. Progress must rest upon a careful search for and elimination of physical hazards which might lead to falls. This search must be accompanied by equally careful selection and patient training among many occupational groups.

The first four items of list No. 1 are worthy of special note. Falls from or with scaffolds and wood platforms accounted for more than a quarter of the 31 cases. In 2 of the 5 scaffold cases, men apparently slipped or inadvertently stepped from the scaffold, without any failure of the scaffold itself. But in the other 3 cases something happened to the scaffold. The supporting rope broke in one case. In another case the scaffold had been extended by nailing planks together and the nails pulled out. In the third case the coping hook came loose.

Two men slipped or inadvertently stepped from platforms, and in one case the platform collapsed. Safe standards and safe practices in scaffold and platform work will save lives.

Three men fell to their death through glass skylights. Some glass skylights have a deceptive appearance of solidity, and men trust their weight to them. In 3 cases the results were disastrous. Guards, warning signs or other special protective measures are indicated.

Two men fell through unguarded openings in floors. Guard such openings and save lives.

Accidents and job titles of those fatally injured in the miscellaneous group are:

FALLS, FATAL ACCIDENTS, MISCELLANEOUS

Agencies or Events	
Ladder	1
Icy Sidewalk	1
Window, fell through	1
Stairway	1
Occupations	
Meter Installer	1
Collector	1
Sales Supervisor	1
Laborer	1

The nature of electric utility operations requires that much of our work be done at heights. Consequently, no safety effort in this industry can be really effective which does not include control of hazards which lead to falls.

The conditions which result in falls seem to be infinite in number and variety. But the cause is by no means hopeless. Progress has been made through the years. Still greater progress is possible.

Factors in Good Personnel Administration

(*Continued from page* 22)

performance of his mission, rather than by having it validated through a directive. It is a mistake to believe that the personnel job gains stature by inducing top management to scold the operating supervisors or scare them into doing their personnel job. Sound personnel management can never be achieved by spelling out principles and enjoining compliance, and then paying no attention to what happens beyond that point.

Where the personnel representative systematically, through planned contacts, familiarizes himself with the personnel problems of the operating job, and stimulates the interest of the supervisors in good personnel practices applied to situations which have been thoroughly talked over, he not only gains skill through the experience of dealing with actual problems, but a recognized position of leadership. Where he obviously knows what needs to be done, where it needs to be done, and adds to these a disposition to get at the job and do it, the personnel representative takes his proper place as a representative of top management by accomplishment rather than edict.

As with any big job, the overall result depends upon the integrity of a great many individual operations, most of them performed where they attract little attention. Each employee who is effective on the job in which he is placed represents good personnel work. Each employee, who is less than fully useful, within his abilities, signalizes poor personnel work.

Every phase of the personnel job shares one feature in common. Each required step takes actual doing. The test of the job lies, not in the number of people in the company who pay lip service to sound personnel principles, but in the positive action which is taken to make the personnel job go right as often as possible in the first instance. This means that everyone involved must know what to do, and must be disposed to do it, at every stage of the game.

The satisfaction of the job lies in the continuity of teamwork which prevails throughout the plant in getting the personnel job done. The supervisor who carries on the continuous planning which insures effective use of his people reflects credit upon the personnel representative. A high proportion of successful workers likewise signalizes the success of his mission. Therein lies the basis of pride in himself, in his job, and in his organization which is the measure of a good worker.

Members of AEIC-EEI Heat Pump Committee Establish Zones to Gather Field Test Data

(*Continued from page* 18)

being made nationally in the development of the heat pump and to otherwise assist in any way possible.

This is the second report to appear in the EEI BULLETIN on the activities of the Joint AEIC-EEI Heat Pump Committee. A third report, to appear in a subsequent issue, will include a complete list of heat pump research projects now in progress or which are contemplated for the near future, together with a brief description of the main objective of each project. Also, as part of this report, it is hoped to present a recommended procedure, including type and kind of instruments to be employed, for obtaining the desired field operating data.

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Central Hudson Books and Film Aimed at Better Employee-Public Understanding

TWO unusually well-developed mediums directed towards better employee and public understanding of the company have been produced recently by the Central Hudson Gas and Electric Corp., Poughkeepsie, New York. The first, an illustrated manual, "Working With Central Hudson," aims its brilliant crimson cover and 32 pages at both new and old employees. The second, a film and a booklet, "Youth's Frontier," to provide better understanding of Central Hudson's meaning as a local business, also announces the inauguration in 1949 of an annual 4-year engineering scholarship to Rensselaer Polytechnic Institute, offered by the company to high school graduates who have met certain requirements.

Beginning with a message from Ernest R. Acker, president of the company, "Working With Central Hudson," by use of charts and illustrations accompanied by a well-written text, gives new employees a general picture of the company, its policies, regulations and benefits to employees, while also serving to revive older employees' interests in company affairs by presenting facts and bringing them up to date on matters with which they may have had little contact in past years.

The manual has been well received by employees and has been made available to the placement bureaus of various technical schools and to all high schools in Central Hudson territory from which the company expects to recruit non-technical personnel in the future.

The film, "Youth's Frontier," is based on the American Way of Life. It portrays Central Hudson Gas and Electric Corporation as a local business. Throughout the action of the picture it outlines how such a business benefits the entire community; how a number of small investors invest their savings to buy the plants and tools to give other men work; how much of the money paid to these men for their work stays in the community to buy the necessities of life, and how, through the pooling of capital, management and labor, money, vision and muscle, a vital service may be rendered to every factory, farm, store and home.

The accompanying booklet tells of an indoctrination course offered by the company which is the first step toward qualification for the engineering scholarship. Each summer boys who have completed three years of high school work and have met other general qualifications, will be selected for a three-week period of indoctrination during the summer in all phases of the company's business. Upon completion of his high school education one of these candidates will be awarded the engineering scholarship by a board of judges consisting of the Dean of Students of RPI, a representative of the American Institute of Electrical Engineers and a representative of the company.

Winners are assured of summer employment from time of award until graduation but neither the winner nor Central Hudson is obligated to enter into any employment agreement after graduation.

Scholarship candidates who are not selected by the board of judges but who have successfully completed both the indoctrination course and a 4-year high school course, are eligible for employment by the company.

Copies of the explanatory booklet are given to everyone seeing the film which is scheduled to be shown at high schools and to various groups throughout the company's territory.

IFMA Contest Offers $1500 in Prizes for Technical Articles on Industrial Furnaces

THE Industrial Furnace Manufacturers Association has announced the "IFMA Prize Contest" to promote the publication of more and better articles in the trade press describing the economic advantages obtained by the use of modern industrial furnaces, kilns, and ovens. Papers published between October 1, 1947 and September 1, 1948, will be eligible for the prizes.

The articles must be original and may be technical society papers subsequently published in trade or technical papers. Competition in the contest is open to all individuals or groups with the single exception that they must not be connected with the industrial furnace, kiln, or oven industry.

The papers will be judged for: (a) completeness and accuracy of operating data such as fuel or electricity costs, labor costs, floor space requirements, savings in preceding or subsequent operations, material costs, etc.; (b) concise and complete coverage of improvements in the product, such as physical qualities, appearance, the reduction of rejects or rework, etc.; (c) clearness and completeness of description of equipment including size, construction, operating cycle, etc.; (d) uniqueness of design with regard to method of operation, material handling, heating, etc.; (e) completeness of description of parts treated, size, material, rate of production, etc.; (f) in general, the ability for a possible user in the same or similar industry to apply these data to his product or operations, and to determine the possible advantages from his use of the equipment or process.

Cash awards will be made to the three winning authors in these amounts: First Prize, $1,000; Second Prize, $300; Third Prize, $200. In addition special non-cash awards will be made to the magazines publishing the three winning awards.

Judges will be appointed by Industrial Furnace Manufacturers Association, and will be announced at a later date.

Formal rules and other details can be obtained from the I.F.M.A., 420 Lexington Avenue, New York, N. Y.

Reddy Kilowatt Annual Report Contest

BECAUSE of the great interest shown during past years, competition for the ninth annual Reddy Kilowatt Annual Report Contest is now open to all business managed power and light companies, whether or not they use the Reddy Kilowatt Service, Ashton B. Collins, head of the Reddy Kilowatt organization, has announced.

The contest is conducted to encourage companies to simplify, dramatize and humanize their annual reports to create greater stockholder interest and understanding of past operations. At the same time it is aimed at creating better public relations among the stockholders by enabling them to better understand company problems and accomplishments.

Entries, to compete for the handsomely engraved bronze plaque, must consist of five copies of the company 1947 annual report. All entries must be received at Reddy Kilowatt Service, 50 Church St., New York 7, N. Y., by May 15, 1948.

PERSONALS

PERCY S. YOUNG, retired as chairman of the executive committee of Public Service Corp. of New Jersey and its subsidiary companies, on his seventy-

MR. YOUNG

seventh birthday, after more than 49 years with Public Service and a predecessor company.

Mr. Young was secretary and assistant treasurer of the Hudson County Gas Co., a predecessor company of Public Service, and when Public Service was formed in 1903 he was elected comptroller of the latter. He became treasurer and later was elected vice president in charge of finance of Public Service, and, in 1939, was elected chairman of the executive committee.

Mr. Young has long been active in national public utility associations. Also, for a long period he contributed heavily of his time and unusual talents to furthering the work of the Edison Electric Institute and its predecessor, the National Electric Light Association. From 1926 to 1931 he served with distinction as Treasurer of the NELA and as a member of the Finance Committee, becoming a member of the NELA National Executive Committee in 1932. The Institute had the benefit of his judgment as an outstanding senior executive of the industry through his services as a member of the Operating Committee from 1941 until 1944, and as a member of the Institute's Board of Directors from 1944 until the end of 1947. He was president of The Welfare Federation of Newark (1926-28) and has been closely associated in its work since then. He also has been active in the Community Chest of Montclair. He is a member of the council of New York University and a member of the board of trustees of Rutgers University.

WALKER L. CISLER, JAMES H. LOBBAN and EDWARD T. GUSHÉE have been elected vice presidents of the Detroit Edison Company. Announcement of these New Year's appointments was made by Prentiss M. Brown, chairman, and James W. Parker, President. THOMAS E. HURNS has been appointed general accountant.

Mr. Cisler, named executive vice president, returned in 1945 from serving on General Eisenhower's staff in Europe where he directed re-establishment of utility services. He is a consultant for the United States Atomic Energy Commission and has been chief engineer of Detroit Edison's power plants.

Mr. Cisler's duties as executive vice president under the general manager, will include responsibility for personnel, employment and medical and safety departments which were formerly directed by the late James H. Walker, vice president, who died December 1.

Mr. Lobban has been secretary and general accountant of the company and has been employed continuously since 1911. He will have general responsibility for the company's accounting department, but will turn over the specific duties of general accountant to Mr. Hurns, assistant secretary. Both men have had a long training in the property-record, tax and accounting divisions of the business.

Mr. Gushée has been assistant to the chairman and was first employed by Detroit Edison in 1920. He has been active in company sales, purchasing and management affairs and in ordnance matters both in Washington and Detroit during the last war.

Oklahoma Gas and Electric Company has announced the promotion of DONALD S. KENNEDY to executive vice president and of W. B. GESELL and W. R. WOLFE to vice presidencies.

Mr. Kennedy fills a vacancy created five years ago when George A. Davis became president of the company. He joined the utility's accounting and auditing department in 1923 following graduation from the University of Arizona with a degree in accounting and economics. He became treasurer of the company in 1942.

Mr. Gesell held the position of executive assistant before his recent promotion. He has been identified with OG&E more than 20 years, starting in the rate department.

A graduate of the University of Oklahoma, Mr. Wolfe has specialized in power sales engineering and for many years was manager of the company's eastern division, with headquarters at Muskogee. He is a graduate of the University of Oklahoma, having received his E.E. degree in 1926.

Promotions of three executives, one to a vice presidency, have been announced recently by Utah Power and Light Company. At the same time the company announced retirement of a fourth veteran executive.

Promoted were: ROY H. ASHWORTH, commercial manager since 1944 to vice president in charge of the company's commercial division affairs.

OLIN H. RIRIE, manager of the southern division, to Ogden division manager.

ORSON M. SLACK, senior industrial salesman for Ogden division, to succeed Mr. Ririe as southern division manager.

Retired was C. A. WOLFROM, for 20 years manager of the Salt Lake division.

Mr. Ashworth has been a power company employee for more than 34 years. A graduate of University of Minnesota in electrical engineering, he had served in the company's statistical department, as assistant to the general manager and as general superintendent prior to becoming commercial manager.

Mr. Ririe was first employed by U P & L in 1923 as a meter reader and was promoted to managership of the southern division in 1941. Mr. Slack started with the company in 1917. He was assigned to the northern division as senior industrial salesman in 1940.

Mr. Wolfrom started with Telluride Power Company as station operator in 1902. Since 1927 he has been Salt Lake division manager.

HARRY T. PRITCHARD, president of the Indianapolis Power and Light Company has been elected president of the Indianapolis Chamber of Commerce.

P. W. Ross has been elected vice pres-

ident of Indianapolis Power and Light Company. He will be assistant to the President and will assume his new duties after January 1.

Mr. Ross, who has been vice president and general manager of the Southeastern Indiana Power Company, with headquarters at Rushville, Ind., for the past two years, previously had more than 19 years' experience in the I P & L organization. He came to the Indianapolis utility as an electrical engineering graduate from Purdue University. Starting as a commercial engineer, he became director of street lighting engineering in 1929, was given charge of rural distribution in 1936, and was appointed executive assistant in 1939. He also served as general manager of the Mooresville Public Service Company, a subsidiary of Indianapolis Power and Light Company.

L. F. CHAMBERS has been elected vice president and treasurer of the Northern States Power Company of Minnesota to fill the vacancy caused by the recent advancement of BERNARD F. BRAHENEY to the position of President and general manager of the company. Mr. Chambers became identified with Northern States in 1912. In 1926 he joined the Public Utility Engineering and Service Corp., Chicago, and is now relinquishing the position of vice president in charge of the finance and accounts department of the company.

HAROLD A. NOBLE has been appointed general superintendent of the San Diego Gas and Electric Company, a position recently created to expedite the company's $40,000,000 expansion program over the next four years. For the past 7 years, Mr. Noble has been superintendent of the electric production department. CHARLES L. HATHAWAY, formerly assistant in that department, succeeds him as the department superintendent.

Mr. Noble joined the San Diego utility in 1925.

E. V. CHRISTENSEN, personnel engineer, Wisconsin Public Service Corp., Milwaukee, has been appointed advertising manager in charge of the company's advertising and publicity activities. In his new work, he assumes the duties formerly handled by Dale Remington, who was taken ill early last year and whose health does not permit him to resume work.

THOMAS B. COPELAND has been appointed manager of Pacific Gas and Electric Company's Shasta division, with headquarters at Red Bluff, Calif., to succeed G. R. MILFORD. Mr. Copeland will retain his present duties as division superintendent along with the managership. Mr. Milford retired after 44 years of service with PG&E, 27 years as division manager. Mr. Copeland has been with PG&E and predecessor companies for 34 years.

J. J. MORRISON has been made assistant to the president of the Gulf States Utilities Company with offices in Beaumont, Texas. Mr. Morrison has been connected with Stone & Webster and Engineers Public Service Company, former parent company of Gulf States, for a number of years. For several years prior to its dissolution he was assistant to the vice president of Engineers. As assistant to the president, Mr. Morrison will serve as an analyst and help in handling the many corporate matters formerly taken care of by Engineers' staff in New York.

CARROLL T. SINCLAIR, chief engineer in charge of engineering and construction, Duquesne Light Company, Pittsburgh, has taken over the duties formerly performed by the late Arthur G. Butler. Mr. Sinclair will retain his former title. He has been connected with the organization since 1925. Since then he has handled many general and specialized problems for the company. He is a fellow and past vice president of the American Institute of Electrical Engineers and a member of the Pennsylvania Electric Association, Edison Electric Institute, Association of Edison Illuminating Companies and the American Standards Association. He has made many contributions to the technical press and has served as chairman of a number of the committees of the various associations to which he belongs.

GILBERT D. BURLEIGH, Project Engineer for the construction of West Penn Power Company's new Mitchell Station, has been appointed Superintendent of the Station.

A graduate of Pennsylvania State College in mechanical engineering, Mr. Burleigh came to West Penn in June 1937 as a member of the Efficiency Department at Springdale Power Station. In 1941 he was transferred to Pittsburgh as Power Department Engineer, devoting his time to maintenance and operation of the smaller stations.

When the No. 7 Unit was added to Springdale Station, Mr. Burleigh was made Project Engineer on the job, and has worked in the same capacity for Mitchell Station since that plant has been under construction.

Mr. Burleigh's headquarters are now at Courtney in the Construction Office of the new Mitchell Station.

MAX E. BRETSCHNEIDER has been named director of employment of the Kansas City Power and Light Company by John W. B. Foringer, vice president in charge of Industrial Relations.

Mr. Bretschneider has a degree in Electrical Engineering from Northeastern University in Boston. He first joined the Kansas City Power and Light Company in 1931 as a test engineer in the company laboratory, moving successively to assignments as laboratory foreman in 1937 and as assistant superintendent of the Meter and Laboratory department since 1944.

Mr. Bretschneider is past chairman of the Kansas City Section of the American Institute of Electrical Engineers, a member of the Meter and Service Committee of the EEI, the Missouri Society of Professional Engineers, the Missouri Valley Electric Association, and the National Society of Professional Engineers.

Succeeding Mr. Bretschneider as assistant superintendent of the Meter, Service and Laboratory department is LAURENCE W. JONES who has been employed by the company since 1928. Mr. Jones has been foreman of that department and is one of the employee designers of a new test rack for meters that speed the testing from 80 to 300 single phase meters a day.

B. F. KINDELL was appoined manager of the company's new Plaza Store. Mr. Kindell has been employed by the company since 1921 when he joined the overhead engineering department, transferring in 1928 to the lighting steam and commercial service division as a lighting and sales engineer. Mr. Kindell is a former president of the South Central Business Association, the employee Mutual Benefit Association of the company and is currently serving as vice chairman

of the Heart of America Chapter of the Illuminating Engineering Society.

DOUGLAS DOW formerly Director of Commercial Research of The Detroit Edison Company, has been elected President and General Manager of the Detroit Testing Laboratory, which has been reorganized to furnish Detroit industries with advanced testing and development service enjoyed only by large companies in their private laboratories.

Mr. Dow brings a distinguished civic and engineering record to his new post. In the regime of several mayors, he has served as Detroit's Commissioner of Purchases and Supplies, as President of the Board of Water Commissioners, and as Trustee of the Wayne University Foundation.

He served as Vice President of the old Detroit Engineering Society and was one of the charter members of the new Engineering Society of Detroit and is Assistant Secretary and Treasurer of the Rackham Engineering Foundation. In September, Governor Sigler of Michigan appointed Dow as a Commissioner of the Michigan Department of Mental Health.

During the war, following two years in Washington in the Motor Transport Division, he was transferred to the China-Burma-India theatre at New Delhi, as Lieutenant Colonel in the Quartermaster Reserve.

The Detroit Testing Laboratory was founded in 1903 by William P. Putnam who has retired as President. It served in its early years as a wet-nurse for a number of Detroit's now famous factories. It was the sole source of chemical assistance for such companies as Cadillac, Ford, Buick, Olds, Durant, Hupp and other automotive concerns, according to Mr. Putnam.

On the retirement of THOMAS H. BLAIKIE, assistant treasurer of the Connecticut Light and Power Company since 1927, he will be succeeded by RICHARD P. PEALE, an accountant for the company.

Mr. Blaikie began his career in the public utilities field 43 years ago with the Consolidated Railway Company of Connecticut and later was employed by the Berkshire Street Railway Company in Pittsfield, Mass., and the New England Investment and Security Company in Boston.

He subsequently returned to New Haven where he served as head bookkeeper and chief clerk for the Connecticut Company, successor to the Consolidated Railway Company. In 1912 he was associated with the United Electric Light and Water Company in Waterbury, and after serving as auditor for the Albany and Southern Railway Company for a short time, returned to Waterbury in 1917 as auditor for The Connecticut Light and Power Company. Mr. Blaikie became assistant treasurer of the company in 1927.

Mr. Peale joined the Eastern Connecticut Power Company, a predecessor of The Connecticut Light and Power Company in 1925 and has since been a traveling auditor for the company and a member of its bookkeeping and statistical departments. He is a graduate of Norwich Free Academy and Norwich University where he was a member of Sigma Alpha Epsilon fraternity.

Community Builders

(*Continued from page* 6)

done, we've come a long way in developing an efficient, smooth-operating organization that is providing a high type of public service. Today, we're coming to you again with plans for the future, asking your help in realizing the new objective because if we are to realize them we have to depend heavily on the best efforts of each of you.

Right now, as we go on with this program, we are facing power demands that exceed anything we've known before, even through the war years . . . The story in a nutshell is that we are expanding, tying up a lot of money on which we can expect no returns until the program is completed. To meet such a situation we've got to tighten our belts and settle down to a real operating job. We've got to make the most of our operating dollar and we've got to keep service up to standards while we wrestle with a power situation that is going to become even tighter.

Your stake is as big as anyone else's. In this program we're not making provision for a recession. Instead, we're shooting at a future that will mean greater expansion of all industry including our own, and that can only lead to the security for which all of us are striving.

Key-Operated Resetting Device for Cumulative Demand Registers Aids Meter Reading

(*Continued from page* 23)

original position. This prevents the register from being left in an inoperative condition with the key removed.

Each key issued to employees authorized to take demand register readings is serially numbered and charged to the individual employee. However, if unauthorized use of the key is made during the period between regular readings, or if a foreign key has been used, this fact will be clearly evident to the meter reader because of the fact that the "as found" reading on the demand dials will not agree with the previous "as left" reading which was recorded on the meter reading record sheet by the previous meter reader.

The lock resets are installed as standard equipment for all cumulative type demand registers on the Consolidated Edison System and all demand register reset mechanisms will shortly be of this type. There are approximately 30,000 key-operated reset cumulative demand registers in use on the Company's system at the present time, and their use has been found entirely satisfactory from a meter reading standpoint as well as from the meter engineering and meter maintenance viewpoints.

Power Industry Successfully Meets Peak Power Demand

(*Continued from page* 1)

West Central: Reserve margin 8 per cent. Curtailment of 3,000 kw in effect.

Southwest: Reserve margin 5 per cent.

Mountain: Reserve margin 13 per cent. A curtailment of 9,000 kw in effect.

Pacific Northwest: Reserve margin 4 per cent. Power loads amounting to 12,000 kw had been shifted to offpeak hours.

Pacific Southwest: Reserve margin 4 per cent. (*Continued on next page*)

The peak power demand occurred Tuesday afternoon, December 23, in New England and along the Middle Atlantic sea coast. Farther west and south it occurred earlier in the month.

The passing of the high December peaks, caused by the short days of the period and pre-Christmas holiday activities, will appreciably lower the demands on power company generating facilities during the next six months. Meanwhile new installations of electric generators are being made at a record-breaking rate.

How REA Cooperatives Fared for Power

Power companies serve about 500 of the approximately 900 REA cooperatives in operation. Reports from all these companies, except 24 not yet heard from (which serve 32 cooperatives), give information which contradicts, insofar as the power companies are concerned, the recent "power shortage" report by REA Administrator Claude Wickard.

The policy of the companies was to make power available to the great body of consumers and avoid interruptions of their power supply. They met all the demands of their REA contracts except in the case of one company where a curtailment of 10 per cent was in effect for two days and later another curtailment of 15 per cent was in effect three days due to equipment failure and low stream flow.

The reporting companies accepted 47 additional contracts to supply power to cooperatives and furnished additional power in 18 more instances to municipal plants or smaller companies to enable them to increase the power supply to cooperatives. Only three companies involving the supply of five cooperatives were unable to accept at once all requests from cooperatives for power contracts, although in a number of cases transmission distances were considerable and shortages of materials and labor on the part of the companies and on the part of the cooperatives caused extended delays.

Building Program

A year-end check with equipment manufacturers showed orders for 17 million kw of generating capacity to be delivered in the next four years. There were 800,000 kw of generating capacity delivered late in 1947 but not in operation at the year end. The industry expects a more favorable margin of reserve practically everywhere in the country by early 1949 and normal reserves by the end of 1951.

CONVENTIONS AND MEETINGS

1948

JANUARY

12-14	Canadian Electrical Association, Winter Conference, Chateau Frontenac, Quebec, Can.
26-30	American Institute of Electrical Engineers, Pittsburgh, Pa.

FEBRUARY

5-6	Missouri Valley Electric Association, Power Sales Conference, President Hotel, Kansas City, Mo.
5-6	Pennsylvania Electric Association, Communications Committee, Benjamin Franklin Hotel, Philadelphia, Pa.
9-10	Transmission and Distribution Committee, EEI, New Jefferson Hotel, St. Louis, Mo.
9-10	Prime Movers Committee, EEI, Edgewater Beach Hotel, Chicago, Ill.
9-11	Meter and Service Committee, EEI, Biltmore Hotel, Oklahoma City, Okla.
12-13	Electrical Equipment Committee, EEI, Netherland Plaza Hotel, Cincinnati, Ohio.
16-17	Accident Prevention Committee, EEI, Roosevelt Hotel, Pittsburgh, Pa.
19-20	Pennsylvania Electric Association, Prime Movers Committee, Hotel Alexander, Hagerstown, Md.
19-20	Pennsylvania Electric Association, Electrical Equipment Committee, Castleton Hotel, New Castle, Pa.
19-20	Pennsylvania Electric Association, Systems Operation Committee, Abraham Lincoln Hotel, Reading, Pa.
26-27	Pennsylvania Electric Association, Transmission and Distribution Committee, Castleton Hotel, New Castle, Pa.

MARCH

1-5	The American Society of Mechanical Engineers, Spring Meeting, New Orleans, La.
11-12	Oklahoma Utilities Association, Biltmore Hotel, Oklahoma City, Okla.
14-18	National Electrical Manufacturers Association, Edgewater Beach Hotel, Chicago, Ill.

APRIL

5-8	National Association of Corrosion Engineers, Jefferson Hotel, St. Louis, Mo.
6-8	Fourteenth Annual Sales Conference, EEI, Edgewater Beach Hotel, Chicago, Ill.
7-9	Missouri Valley Electric Association, Engineering Conference, President Hotel, Kansas City, Mo.
8-10	Southeastern Electric Exchange, Annual Conference, Boca Raton Club, Boca Raton, Florida.
12-14	National Conference of Electric and Gas Utility Accountants, New Jefferson Hotel, St. Louis, Mo.
13-14	Indiana Electric Association, Young Men's Utility Conference, Ipalco Hall, Indianapolis, Ind.
19-21	Purchasing and Stores Committee, EEI, Hotel Cleveland, Cleveland, Ohio.
27-29	Chamber of Commerce of the U. S. A., Washington, D. C.
28-30	Missouri Association of Public Utilities, Hotel Jefferson, St. Louis, Mo.

MAY

3-5	Engineering Committees, EEI, Edgewater Beach Hotel, Chicago, Ill.
5-7	Missouri Valley Electric Association, Rural Round Table Discussion and Sales and Rural Conference, President Hotel, Kansas City, Mo.
7-9	Westinghouse Agent-Distributors Association, Hotel Statler, Buffalo, N. Y.
10-13	National Fire Protection Association, Statler Hotel, Washington, D. C.
18-21	National District Heating Association, Hotel Statler, St. Louis, Mo.
24-25	Meter and Service Committee, EEI, Lafayette, Indiana.
27-28	Missouri Valley Electric Association, Accounting Conference, (Place to be determined).
27-28	Public Utilities Advertising Association, Hotel Cleveland, Cleveland, Ohio.

JUNE

1-3	EDISON ELECTRIC INSTITUTE, Annual Convention, Atlantic City, N. J.
16-18	Pacific Coast Electrical Association, Inc., Hotel Fairmont, San Francisco, Cal.

EDISON ELECTRIC INSTITUTE OFFICERS AND COMMITTEES

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(Terms Expiring 1949)

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(Terms Expiring 1950)

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L. A. MAGRAW.....Central Illinois Public Service Co., Springfield, Ill.
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The Executive Committee consists of the following members of the Board of Directors: Messrs. H. B. Bryans, W. H. Burke, R. E. Dillon, A. H. Kehoe, E. L. Lindseth, P. H. McCance, W. H. Sammis, L. V. Sutton.

EDISON ELECTRIC INSTITUTE OFFICERS AND COMMITTEES

(Continued)

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Depreciation Accounting, A. H. KUHN.....Pioneer Service & Engineering Co., Chicago, Ill.
General Accounting, O. K. BOYD.....Consolidated Gas Electric Light & Power Co., Baltimore, Md.
Plant Accounting, L. C. PURSELL.....Pennsylvania Power & Light Co., Allentown, Pa.
Taxation, HERBERT S. HOWARD.....Niagara Hudson Power Corp., Syracuse, N. Y.

COMMERCIAL

Commercial Division General, RALPH P. WAGNER.....New York Power & Light Corp., Albany, N. Y.
Commercial Sales Section, J. S. SCHUCHERT.....Duquesne Light Co., Pittsburgh, Pa.
Farm Section, E. C. EASTER.....Alabama Power Co., Birmingham, Ala.
Industrial Power and Heating Section, J. R. HARTMAN.....The Cincinnati Gas & Electric Co., Cincinnati, Ohio
Residential Section, J. M. STEDMAN.....Pennsylvania Power & Light Co., Allentown, Pa.
Sales Personnel and Training, R. S. BELL.....The Commonwealth & Southern Corp., New York, N. Y.
Wiring and Specifications, R. F. HARTENSTEIN.....Ohio Edison Co., Akron, Ohio

ENGINEERING

Engineering Division General, P. H. CHASE.....Philadelphia Electric Co., Philadelphia, Pa.
Electrical Equipment, CHESTER A. CORNEY.....Boston Edison Co., Boston, Mass.
Hydraulic Power, G. R. STRANDBERG.....Stone & Webster Engineering Corp., Boston, Mass.
Meter and Service, W. G. KNICKERBOCKER.....The Detroit Edison Co., Detroit, Mich.
Prime Movers, G. C. DANIELS.....The Commonwealth & Southern Corp., Jackson, Mich.
Transmission and Distribution, THOMAS J. BROSNAN.....Buffalo Niagara Electric Corp., Buffalo, N. Y.

GENERAL

Accident Prevention, E. J. KREH.....Duquesne Light Co., Pittsburgh, Pa.
Industrial Relations, C. B. BOULET.....Wisconsin Public Service Corp., Milwaukee, Wis.
Insurance, I. M. CARPENTER.....Ebasco Services Inc., New York, N. Y.
Membership, J. F. FOGARTY.....The North American Co., New York, N. Y.
Purchasing and Stores, R. S. KING.....Union Electric Company of Missouri, St. Louis, Mo.
Prize Awards, H. M. SAWYER.....American Gas & Electric Service Corp., New York, N. Y.
Rate Research, E. N. STRAIT.....Pioneer Service & Engineering Co., Chicago, Ill.
Statistical, WINSOR MARTIN.....Pioneer Service & Engineering Co., Chicago, Ill.
Transportation, JEAN Y. RAY.....Virginia Electric & Power Co., Richmond, Va.
Codes and Standards (a Subcommittee of the Board of Directors), H. B. BRYANS..Philadelphia Electric Co., Philadelphia, Pa.

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